An Examination of Cognitive and Behavioral Referents of Acculturation and Their Impact on Predictors and Frequency of Sexual Communication Between Mexican-Origin Parents and Their Young Children

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ABSTRACT

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Effective familial communication regarding adolescent sexual health is recurrently identified as an important protective factor against high-risk sexual behavior, and is considered a valuable and necessary component of prevention. This is especially true for Latino adolescents who are disproportionately affected by unintended pregnancies and sexually transmitted infections, and for whom family-based interventions are the most efficacious. Unfortunately, sexual risk prevention research has generally excluded the role of culture in the design and implementation of sexual health interventions. This critical omission has generated interventions that conceivably lack cultural sensitivity, and run the risk of failure if their design contradicts the cultural beliefs and values of the targeted population.

The purpose of this study was to investigate, among demographically comparable samples of Mexican-American parents, potential barriers to sexual health and safety communication that may be associated with cultural norms, beliefs and values. Its first objective was to examine the extent to which commonly held cultural values and beliefs influenced sexual

health predictors and dialogue between Latino parents and their children. This study's second objective was to explore the mediating role of acculturation across each of the sexual communication outcomes. The third and final objective was to examine how these outcomes were distinctly affected by parent and child gender.

Seventy-seven women and twenty men of Mexican-origin (total N = 97) - parenting a child between 5 and 14 years of age and living in Boulder, Colorado - participated in the present study. They represented three generational levels of Mexicans and Mexican-Americans from varying socioeconomic statuses and representing both sexes.

Key findings indicated that the endorsement of four traditional Latino cultural beliefs and values were moderately associated with factors that predict sexual health communication among Mexican-origin families. General family communication emerged as the heart of the model, denoting the most significantly influenced sexual communication predictive variable for both the mothers and fathers in the sample. The traditional Latino gender roles ascribed to men and women of Latino-origin (*machismo* and *marianismo*), were both negatively associated with effectual family communication, as was *respeto*, which embodies the expectation that children are respectful, obedient, and loyal to their family. Also, the findings suggest that parents who endorse *fatalism* hold more negative views of potential outcomes associated with familial discussions about sexual health and safety. The influence of Latino cultural beliefs and attitudes

on factors that predict sexual communication was not mediated by acculturative status, as hypothesized in the present study, although the findings demonstrated that acculturation independently predicted sexual communication frequency between mothers and their adolescents. Factors that influence familial sexual communication are malleable and can be modified with the support of an effective intervention strategy. Understanding empirically how culture influences factors that predict adolescent sexual risk, as demonstrated in this research, will contribute to the development of strategies that are culturally relevant.

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Chapter I: Introduction

I.I. Problem Statement

In the U.S., the risk of becoming pregnant, or contracting HIV and other sexually transmitted infections (STI) during adolescence is disproportionately higher among ethnic/racial minority youth. To illustrate the disparity, the rate of new HIV infections among Latino males between 13-29 years of age was nearly 43 per 100,000 in 2006 compared to 18.1 per 100,000 for White males (Guilamo-Ramos & Bouris, 2009). Furthermore, according to the Centers for Disease Control and Prevention (CDC), few Latino adolescents are getting tested for HIV (13%), which indicates a potential underestimation of the disease among Latinos (CDC, 2011b).

Fortunately, the long-term downward trend in U.S. teen births has resumed, following a 5 percent increase between 2008 and 2009. Rates have fallen among all racial and ethnic groups, yet Latina adolescents again account for a disproportionate share. The National Center for Health Statistics data indicate that in 2011, the birth rate for Latina teens aged 15-19 years was 49.4 per 1,000, compared to 21.8 per 1,000 for non-Hispanic White teens (B. E. Hamilton, Mathews, & Ventura, 2013). Moreover, research estimates that 52% of Latina teens nationally will become pregnant before they turn 20, in comparison to 19% of non-Latino White teens (National Campaign to Prevent Teen and Unplanned Pregnancy, 2010).

The risk of unintended pregnancy or sexually transmitted infection (including HIV) is especially high among adolescent Latino populations, predominantly due to their early onset of sexual activity and limited condom use (Kalmuss, Davidson, Cohall, Laraque, & Cassell, 2003). Additionally, research suggests that Latino parents are less likely to talk with their children about sexual health, and when they do, the conversations are often initiated after the onset of sexual activity (Hutchinson, 2002). Parent-adolescent sexual communication and the factors influencing sexual health dialogue constitute the principal focus of this study and are explored in detail in Chapter II.

Early romantic relationships and, for females, early puberty generally increase the likelihood of sexual intercourse by the ninth grade (Lieberman, 2006). Premature sexual debut is especially high among African American and Latino youth, and thus contribute to ongoing health disparities between minority and White teenagers and young adults. According to the 2011 National Youth Behavior Risk Survey, 7.1% of Latino youth had sexual intercourse prior to age 13, compared to 3.9% for non-Latino White youth (CDC, 2011b). This is of concern because early initiation of sexual intercourse places female adolescents at elevated risk of experiencing unintended pregnancy. Moreover, research stipulates that early initiation of sexual activity is linked to sex with multiple partners, which is subsequently associated with a higher likelihood of

STIs, including HIV. For those young people having sex by the ninth grade, the seeds of sexual risk-taking are sown early in adolescence.

While condom use can effectively prevent unintended pregnancies and reduce HIV infection, data consistently reveal that Latino adolescents use condoms less frequently than African American and White adolescents (Bourdeau, Thomas, & Long, 2008; A.M. Villarruel, Jemmott, Jemmott, & Ronis, 2004). As a result, risky sexual behavior remains the leading cause of HIV infection for Latino youth (Guilamo-Ramos & Bouris, 2009). Recent data indicate that 41.6% of sexually active Latino youth did not use a condom during their last sexual intercourse. This figure increases to 47% among Latina females who, according to the Youth Risk Behavior Surveillance System, were the least likely of all youth to use a condom at last intercourse (CDC, 2012b). Furthermore, relationships between younger females and significantly older males is not uncommon among Latino populations (B. V. Marin, Coyle, Gomez, Carvajal, & Kirby, 2000), a factor that is associated with increased risk for early sexual debut (Sabatiuk & Flores, 2009). These differences in unprotected sex may be responsible, to some extent, for the elevated rates of HIV contraction among Latinos.

Of particular concern is the association between Latino culture and communication regarding condom use. Research tells us that many Latino families do not openly discuss sexuality with their children, including the importance of condoms (Gilliam, Berlin, Kozloski,

Hernandez, & Grundy, 2007; Sabatiuk & Flores, 2009). Adherence to traditional Latino gender roles can potentially exacerbate this problem for sexually active Latino youth. For example, Latino males who strongly endorse *machismo* may view sex as a way to prove their masculinity, often dictating condom use (Gomez, 2002). In contrast Latina adolescents, who are expected to be chaste and innocent, may feel disempowered and less successful in condom negotiation (Gomez & Marin, 1996). Recent findings on HIV infection elucidate the importance of this issue. The rate of new infections for Latinas in 2009 was more than 4 times that for White females (11.8/100,000 vs. 2.6/100,000) (CDC, 2012a). These findings further suggest that sexual risk prevention efforts are failing to adequately address the needs of this rapidly growing population.

While recent decreases in adolescent childbearing rates are laudable, national teen pregnancy statistics remain unacceptably high, particularly for Latinas. In comparison to most other developed countries, the CDC recently reported that the teen birth rate is up to 9 times higher in the U.S. (CDC, 2011a). The costs associated with risky sexual behavior are substantial, both to the adolescent and to society. It is well documented that teen pregnancy, for instance, renders young mothers especially vulnerable to welfare dependence, poverty, and lack of health care. According to calculations reported by the National Campaign to Prevent Teen and Unplanned Pregnancy, the total public cost of adolescent childbearing in 2004 was estimated at

$9.2 billion a year in medical care, child welfare, incarceration rates, and lost tax revenue (Hoffman, 2006). Furthermore, federal spending on domestic HIV/AIDS in 2010 totaled nearly $20 billion (The Henry J. Kaiser Family Foundation, 2011). According to recent estimates, for every HIV infection prevented, $355,000 is saved in the costs of providing lifelong HIV care and treatment (CDC, 2010). As disproportionately high rates of HIV/AIDS among Latino populations are largely a function of rapidly rising infection rates among Latino youth (National Council of La Raza, 2006), the need for improving prevention efforts targeting this population is evident.

In the last decades the United States has undergone dramatic demographic shifts. The changes in ethnic group composition have reaffirmed the fact that the United States is rapidly becoming a multicultural, multiracial, and multilingual society. Population estimates stipulate that Latinos constituted 17 percent of the nation's total population (US Census Bureau, 2013), making people of Latino origin the nation's largest ethnic or racial minority. Furthermore, growth in the nation's Latino child population has been particularly dramatic. While ten years ago 17% of America's children were Latino, this figure has grown to nearly one-quarter (23%), and it is projected that by 2035 one in three children will be Latino (National Council of La Raza, 2011). As Latino adolescents represent the youngest and fastest growing ethnic minority

group in the nation, their increased risk of poor reproductive and sexual health represents a significant public health concern.

The terms Hispanic and Latino are used interchangeably to refer to persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Latino origin. However, it is important to acknowledge the heterogeneous nature of the Latino population. There is considerable diversity among Latinos in terms of race, migration history, contact with country of origin, educational and socioeconomic status, geographic distribution, and citizen or immigrant status within the United States. The diversity among Latino groups is important to consider regarding adolescent risk as it has been proposed to directly and indirectly influence health status and health outcomes (Portillo et al., 2001). Moreover, diversity among Latinos in relation to health status and health behaviors associated with HIV has long been recognized. Factors accounting for such diversity include geography, Latino ethnicity, nativity, language use, and acculturation.

The present study's sample included only parents of Mexican descent to avoid between-group variation. Individuals of Mexican-origin represent the largest and fastest growing subgroup of Latinos (U.S. Census Bureau, 2004). Moreover, they have the highest proportion of individuals under the age of 18, thus making them a relatively young Latino population (U.S. Census Bureau, 2003). Residents of Mexican descent are also becoming a larger part of

Colorado's growing Latino population. Local census data shows that nearly three in four Latinos in Colorado have Mexican heritage (Colorado Division of Local Government, 2011).

Despite being the fastest growing ethnic minority group in the U.S., research on parenting in Mexican families remains limited (Hill, Bush, & Roosa, 2003). Most research on families of Mexican-origin does not address within-group differences regarding acculturation, education, and socioeconomic status (Cuellar, Arnold, & Maldonado, 1995). Given the growing number of Mexican-origin families in the U.S., it is important for researchers and practitioners to better understand within-group variability through concepts such as acculturation.

While differences exist between Latino subgroups, there are also some shared characteristics such as Spanish language, New World origins, shared values, and customs. Moreover, there are many similarities in terms of culturally based beliefs and values related to sexuality (A.M. Villarruel, Jemmott, & Jemmott, 2005). It is important to consider these shared beliefs in the development and implementation of sexual risk prevention strategies since they provide meaning and context to health information and programs (Kreuter, Lukwago, Bucholotz, Clark, & Sanders-Thompson, 2002). Regrettably, there is a lack of culturally relevant resources and programs available to Latino families that appropriately address adolescent sexual risk (Sabatiuk & Flores, 2009; A.M. Villarruel et al., 2005). The U.S. Surgeon General (2001), among others, recognizes the significance of culture on individuals' behavioral and mental

health, and asserts that culturally-relevant research and programs are warranted (Castro & Alarcon, 2002). This is particularly true for Latino populations who experience disproportionately high rates of teen births and HIV/AIDS, and have often been absent from the adolescent sexual health literature. However, sexual risk prevention research generally excludes the role of culture in the design and implementation of sexual health and safety interventions. In a recent review of Latino sexual risk prevention efforts, investigators found that relatively few intervention research studies and programs have been dedicated to reducing sexual risk among Latino youth, despite their particular vulnerabilities in experiencing negative reproductive health outcomes (A.M. Villarruel, Guilamo-Ramos, & Bauermeister, 2012). Effective family sexual health interventions must be tailored to the beliefs and circumstances of the clients they serve. A generic approach risks failure if its design conflicts with the cultural beliefs and values of the targeted population (Fontes, Cruz, & Tabachnick, 2001; Levy, 1988). Moreover, studies demonstrate that Latinas will terminate services prematurely if they perceive themselves as being judged or misunderstood (Rivera Marano, 2000). Therefore, there is a need to generate culturally relevant research that explores how culture influences Latino adolescent sexual risk and factors that predict risk.

I.II. Research Model and Theoretical Considerations

According to Lescano, no single integrative culturally based theory has been developed to guide interventions with Latino adolescents and their families (2009). As such, the present research is guided by both empirical research and consideration of three theoretical models that help to explain the processes underlying the hypothesized relationships among the study variables. These theories, summarized below, include sociocultural theory, ecodevelopmental theory, and cultural change theory.

Sociocultural theory.

An emerging theory in psychology, sociocultural theory looks at the important contributions that society makes to individual development and underscores the interaction between developing people and the culture in which they live. Sociocultural theory grew from the work of seminal psychologist Lev Vygotsky who believed that parents, caregivers, peers and the culture at large were responsible for the development of higher order functions (Vygotsky, 1978). It stipulates that our cognitive developmental processes and learning processes are in fact, merely products of our society and culture. Moreover, sociocultural theory recognizes that different cultures have various systems, including beliefs, values, manners, normative behaviors and practices. Our culture teaches us behavior, which may vary according to our society, and our socialization within a specific culture and society molds our behavior.

Recently, there has been increased attention given to disentangling immigrant status from culture as the focus on immigrant families has intensified (Quintana et al., 2006). Culture is regarded not as a status but as a process that is dynamic, changing, and reciprocal in nature. This process embodies adapting to or learning what it means to be a member of one's society in the context of ongoing shifts in sociological, historical and political influences. The term ''sociocultural'' thus reflects these multiple influences (Chao & Otsuki-Clutter, 2011).

Significant advances have been made over the past decade in moving from merely demonstrating ethnic differences to also addressing well-researched sociocultural and/or contextual processes for explaining these differences. Inclusion of these underlying processes is especially evident in parenting and family socialization research, notably with studies involving immigrant families. The focus on immigrants has generated an increasing number of studies that include, among others, diverse Latino populations. Many of these studies identify and incorporate constructs appropriate for these immigrant groups. While much of the research focuses on parenting and parent-adolescent relationships, there is also a body of research on other family influences including family cultural values (Chao & Otsuki-Clutter, 2011).

In sociocultural research examining adolescents' communication with parents, studies find that Latino immigrant parents, in comparison to European American parents, are often more domineering in conversations involving topics such as sex and drugs. As a result, adolescents

often are less likely to disclose pertinent information to their parents. These results highlight the more conservative values of immigrant parents regarding adolescents' dating and sexual activity and the greater restrictions they place on their adolescents, notably daughters. Studies have also found that limited or poor communication is associated with lack of knowledge among adolescents about sexual risk as well as adolescents' withholding information from parents about their dating and sexual activity (Lau et al., 2005).

The focus of sociocultural theory is not only on how adults and peers influence individual learning, but also on how cultural beliefs and attitudes impact the ways in which instruction and learning occur (Chao & Otsuki-Clutter, 2011). In applying sociocultural theory to the present model, Latino parents' cultural beliefs, values and attitudes were hypothesized to influence their parenting, including the ways in which they communicate with their children about sexual health.

Ecodevelopmental theory.

The model receiving the most attention with regard to behavioral intervention with Latino adolescents and families is ecodevelopmental theory (Lescano, Brown, Raffaelli, & Lima, 2009) which borrows from and extends Bronfenbrenner's social ecological framework (Pantin, Schwartz, Sullivan, Prado, & Szapocznik, 2004). Bronfenbrenner's theory conceptualizes the social ecology of the individual as a set of four interacting systems. At the innermost level are the microsystems, which are the immediate social settings or contexts as well as the adolescents'

relationships within these contexts. The adolescents' primary relationships within his or her microsystems are those with parents and other family members, teachers, and peer group members including friends and other influential peers. These relationships have the power to impact the adolescents' values or behaviors either in a healthy or dysfunctional direction. Each microsystem setting or context is characterized by risk and protective processes that can either promote or guard against problem behaviors, including number of sex partners, unprotected sex, alcohol intake and having sex, drug abuse and abstinence. For example, effective parent adolescent communication (O'Sullivan, Meyer-Bahlburg, & Watkins, 2001), effective parent-adolescent communications about sex (K. S. Miller, Levin, Whitaker, & Xu, 1998; Whitaker & Miller, 2000), and strong parent-adolescent connectedness (B. Miller, 2002; Prado et al., 2007) are protective factors associated with a decreased likelihood that adolescents will engage in risky sexual behaviors.

The theory's focus is placed on dynamic social interactional processes that can be restructured and modified through intervention (Prado et al., 2006). Interventions guided by ecodevelopmental theory are those that focus on changing aspects of the adolescent's social context that can impact their developmental trajectories and can therefore reduce risk for, and increase protection against, drug/alcohol use and unsafe sexual behaviors. Ecodevelopmental theory posits that family factors can be especially protective in reducing adolescent risky

behaviors and should be emphasized in the design and implementation of sexual risk prevention efforts. Parent-centered interventions that focus on building skills, improving self-efficacy, acquiring information, and gaining positive parenting practices provide the preparation necessary for families to work effectively with adolescents in building healthy sexual behaviors and skills to prevent HIV/AIDS (O'Donnell, Stueve, Agronick, & Wilson-Simmons, 2005). Prado et al. (2007) found that parent and family interventions guided by ecodevelopmental theory were efficacious and moderately efficacious in the prevention of adolescents engaging in several risky behaviors, including unsafe sexual behavior. Investigators have suggested further potential benefits for using this approach in the development of future adolescent HIV risk-reduction interventions, including parent and family interventions (Prado et al., 2010).

The underlying premise of the present model stipulates that parent-adolescent sexual health communication, informed by ecodevelopmental theory, is a critical factor in the prevention of high-risk sexual activity. Additionally, this theory allows for the integration of culturally relevant factors into its framework, which provides a compelling way of conceptualizing how different levels of the ecology interact and further supports its relevance to the present study.

Cultural change theory.

According to the U.S. Census Bureau (2007) more than half (52%) of Latino youth have

at least one foreign-born parent (Fry & Passel, 2009). An important factor to consider in the development of sexual risk prevention programs, therefore, is acculturation. Acculturation is a multidimensional construct that embodies the process of adopting goals and practices due to exposure to a new culture (Halgunseth, Ispa, & Rudy, 2006). It is variously measured by place of birth, length of residence in the receiving country, language fluency and preference, ethnicity of friends, preferences in food and music, attitudes toward family and gender roles, and ethnic self-identity (Driscoll, Biggs, Brindis, & Yankah, 2001). Acculturation reflects the extent to which immigrants and their descendent have adopted the values, beliefs, customs, and traditions of the host culture (Szapocznik, Scopetta, Kurtines, & Angelesaranalde, 1978). Evidence suggests that changes in core cultural values during the acculturative process are likely to influence behaviors (Sabogal, Marin, Oterosabogal, Marin, & Perezstable, 1987). Also, more acculturated individuals are generally less likely to endorse traditional Latino beliefs (B. Marin & Gomez, 1997).

Research indicates that some Latino parents relinquish traditional childrearing goals perceived as no longer adaptive, or they may substitute new childrearing goals they see as suitable. These new values may originate from their own observations, or from external sources. Cultural change theory provides a framework from which to understand how parental mental models modify in light of immigration (Halgunseth et al., 2006). Applying cultural change

theory to the present model, Latino parents' level of acculturation was hypothesized to influence their cultural beliefs, values and attitudes, and subsequently (mediated by acculturation) their communication behavior about sexual health with their children.

I.III. Research Questions and Study Hypotheses

The following research questions guided this research, followed by their corresponding hypotheses:

RQ1. Will the sexual communication findings of Mexican-origin parents be negatively associated with the independent predictor variables: *respeto*, *fatalism*, and gender role attitudes (*machismo* and *marianismo*)?

H1. After controlling for child and parent demographic variables, it is predicted that as level of endorsement to *respeto* decreases, parents' communication findings with their children about body safety and sexuality will increase.

H2. After controlling for child and parent demographic variables, it is predicted that as level of endorsement to *fatalism* decreases, parents' communication findings with their children about body safety and sexuality will increase.

H3. After controlling for child and parent demographic variables, it is predicted that as level of endorsement to *machismo* decreases, parents' communication findings with their children about body safety and sexuality will increase.

H4. After controlling for child and parent demographic variables, it is predicted that as level of endorsement to *marianismo* decreases, parents' communication findings with their children about body safety and sexuality will increase.

RQ2. Does behavioral acculturation mediate the relationship between cultural construct endorsement and sexual communication findings among Mexican-origin parents?

H5. It is predicted that behavioral acculturation will function as a mediating variable, influencing the significance of this study's predictor variables on its outcome variables.

RQ3. What is the effect of gender (parent's and child's) on the sexual communication findings of Mexican-origin parents?

H6. It is predicted that mothers will report more frequent sexual health and safety communication with both their sons and daughters in comparison to fathers, and will also attain higher scores on the sexual communication predictor measures.

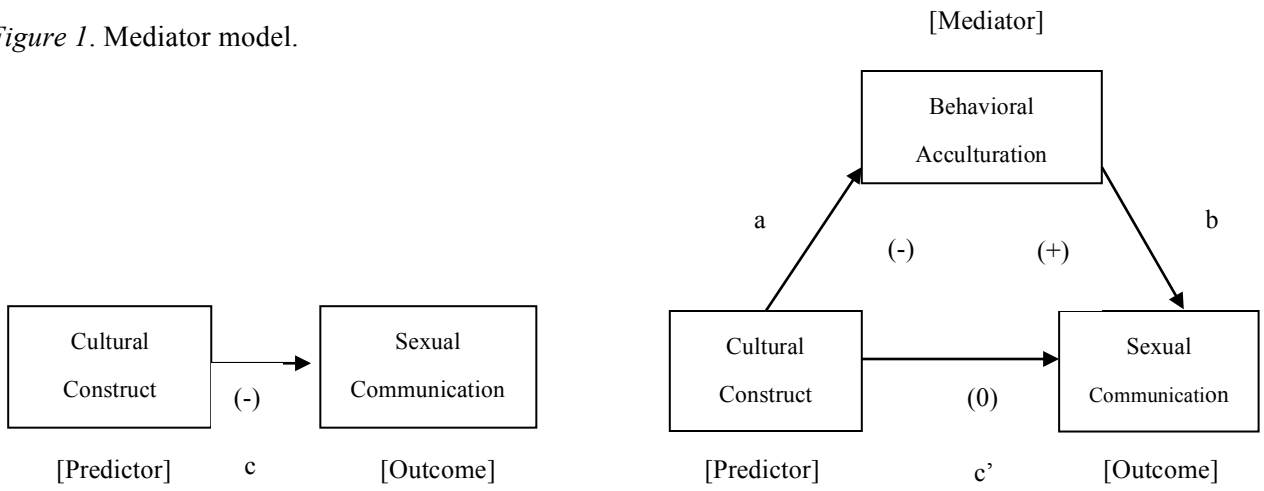
H7. It is predicted that parents will report more frequent sexual health and safety communication with their daughters than with their sons.

I.IV. Mediator Model

This research followed the mediator model proposed by Baron & Kenny (1986). It is based upon a three-variable system comprised of two causal paths feeding into the outcome variable: the direct impact of the predictor variable (path *c'*) and the impact of the mediator (path

b) (see Figure 1). The strongest demonstration of mediation occurs when path *c'* is reduced to zero; this indicates that the mediator altogether eliminates the relationship between the predictor and outcome variables.

Figure 1. Mediator model.



Behavioral acculturation will function as a mediator if it meets the following conditions: (1) variations in levels of the predictor variable significantly account for variations in the presumed mediator (path *a*); (2) variations in the mediator significantly account for variations in the outcome variable (path *b*); (3) when paths *a* and *b* are controlled, a previously significant relation between the predictor and the outcome variables is no longer significant (path *c'*).

Rather than a single dominant mediator, it is more likely that there are multiple mediating factors that influence Latino parent-child sexual communication. Therefore, I predicted a significant decrease in path *c'* which demonstrates that acculturative status is indeed a potent influence on the relationship between Latino cultural endorsement and parent-child sexual communication, although the relationship would exist nonetheless.

Chapter II: Review of the Literature

The primary goal of the present study is to explore among parents of Mexican-origin, the relationship between parental endorsement of traditional Latino cultural values and predictors of parent-child sexual communication, as mediated by acculturative status. Communication about sexual health and safety is a critical component of strategies that embrace a comprehensive approach to adolescent sexual education. As such, this chapter explores sexual communication between parents and their children in the context of the sexual risk prevention policies and programs that have evolved over the past few decades. Because culturally-relevant research is scarce, this chapter begins with an overview of universal adolescent sexual risk prevention, addressing effective characteristics, risk and protective factors, theoretical considerations, benefits realized, and a review of federal polices supporting prevention efforts. This section lays the groundwork for a subsequent discussion on Latino adolescent sexual risk prevention with which it shares many of the same principles and guidelines. Subsequently, the literature on Latino adolescent sexual risk prevention will be explored.

II.I. Adolescent Sexual Risk Prevention: Background

In response to high rates of unintended pregnancy and STDs, a wide variety of programs to reduce sexual risk have been developed and implemented. The programs that are most commonly implemented are curriculum-based sexual health and STD/HIV education programs.

Their impact has been reviewed in multiple studies, both domestically and internationally (Kirby, Coyle, Alton, Rolleri, & Robin, 2011). These reviews consistently support the following conclusions:

1. Sexual health education programs do not increase sexual behavior among sexually active young people, even when they encourage the use of condoms or other forms of contraception.
2. Some of the positive outcomes associated with sex education programs include: delaying the onset of sexual intercourse, reducing the frequency of sexual activity, reducing the number of sexual partners, increasing condom use, increasing other contraceptive use, and/or reducing sexual risk.
3. Programs vary in their ability to change behavior. According to one review (Kirby, 2008) about two-thirds of the programs had a positive significant impact on one or more sexual behaviors among the entire sample or among important sub-groups within the sample. And one-third of the programs improved two or more behaviors.
4. A number of key characteristics differentiate effective programs from those that are ineffective (Kirby, 2007). The effective programs, for example, used psychological theory and research to identify the cognitive risk and protective factors that affect behavior and then

developed program activities to change those factors, gave clear messages about behavior and taught skills to avoid undesired and unprotected sexual activity.

5. Selected family-based programs have been found to be effective at increasing communication between parents and their adolescents and at reducing adolescent sexual risk behavior (Kirby, 2007).

a. Risk and protective factors.

Curriculum-based sexual health and STD/HIV education programs cannot directly control adolescents' sexual risk-taking behaviors. However, programs have the capacity to markedly improve those risk and protective factors that have an important impact on youths' decision making about sexual behavior. Plausibly, if programs correctly identify the factors that influence behavior and if program activities decidedly change those factors, then the program will have an impact on behavior. Yet if programs identify factors that only weakly affect behavior or fail to adequately change the factors, then they may fail to affect behavior. Consequently, it is imperative both to identify the factors influencing behavior and to implement programs designed specifically to change those factors (Kirby et al., 2011). The sexual psychosocial risk and protective factors that have been identified in the literature as affecting sexual behavior include knowledge, perceived risk, personal values, perceived norms, and self-efficacy (Kirby & Lepore, 2007). There is considerable evidence that effective sexual health and

STD/HIV education programs strategically target these factors, which subsequently have a positive affect on adolescent's sexual behavior. While there is evidence that all of these factors affect behavior, in some instances it does so indirectly. For instance, as informed by the theory of planned behavior, it is commonly believed that intentions to perform a behavior most directly affect that behavior (Ajzen & Madden, 1986). In turn, relevant attitudes, perceptions of norms and self-efficacy affect intentions. Further, other factors (e.g., knowledge) may affect attitudes, perceptions of norms and self-efficacy.

Effective prevention of adolescent sexual risk begins with an understanding of the theoretical models that explain adolescents' sexual risk behaviors and the various factors that influence these behaviors (Kirby et al., 2011). Theory is useful in explaining the dynamics of health behaviors, including processes for changing behaviors. Its application can elucidate the influence of various factors that affect health behaviors, including social and physical environments. Moreover, theory can help to clarify reasons why people do or do not engage in certain health behaviors, and suggests how to devise program strategies that reach target audiences and have an impact. For these reasons, program planning, implementation, and monitoring processes grounded in theory have a greater likelihood of success than those developed without the benefit of a theoretical perspective (University of California San Francisco, 2009).

The literature on adolescent sexual health suggests that the theories most commonly integrated into the design and implementation of sexual risk prevention programs include: social learning theory, social cognitive theory, problem behavior theory, ecological systems theory, social control theory, theory of reasoned action, theory of planned behavior, and protection motivation theory. In a theory-guided systemic analysis of adolescent sexual behavior predictors, investigators noted that some of the reviewed studies employed multiple theories in carrying out their research (Buhi & Goodson, 2007).

b. Evolution of sexual risk prevention policies and programs.

Sexual health education and policy in the U.S.

It is difficult to deny the importance of sex education given the current trends in adolescent sexual risk behavior coupled with the social and financial consequences associated with these behaviors. While most would agree that reducing teen pregnancy and infection rates is essential, the approach remains a highly polarized and politicized issue in the U.S. Presented below is an overview of the two most widely adopted approaches to sexual health education in this country: abstinence-only-until-marriage and comprehensive sexuality education.

Abstinence-only-until-marriage programs emphasize abstinence from all sexual behaviors outside of marriage. These programs are designed to promote the conservative social idea that sexual behavior is only morally appropriate in the context of a heterosexual marriage.

Information on even the most basic topics in human sexuality such as puberty, reproductive anatomy, and sexual health is rarely provided (Trenholm et al., 2007). Rather they focus on the importance of marriage and suggest that all sexual behavior outside of marriage is inevitably harmful. According to the Sexuality Information and Education Council of the United States (SIECUS), if contraception or disease-prevention methods are discussed, these programs typically emphasize failure rates (SIECUS, 2011a).

SIECUS is a nationally recognized organization that provides education and information about sexuality and sexual and reproductive health. According to their research, teaching adolescents exclusively about abstinence is insufficient and leaves them woefully unprepared to make sexual health decisions now or in their future (SIECUS, 2011a). In addition, federally funded abstinence-only-until-marriage programs must adhere to a strict eight-point definition. While some aspects of the law's definition are innocuous, others contradict research, public health findings, the goals and tenets of comprehensive sexuality education, and the realities facing today's youth. Moreover, many abstinence-only-until-marriage programs are based on fear, shame, and guilt as a means to try to control young people's sexual behavior. These programs include negative messages about sexuality, distorted information about condoms and STDs, and promote biases based on gender, sexual orientation, marriage, family structure, and pregnancy options.

Abstinence-only-until-marriage programs have been around for well over two decades, and yet there are still no published studies in peer-reviewed journals indicating that these programs are effective. Furthermore, recent evidence suggests that abstinence-only strategies may actually deter contraceptive use among sexually active adolescents, thus increasing their risk of unintended pregnancy and STIs (Boonstra, 2010).

Organizations that support abstinence-only-until marriage programs portray sexuality education as a controversial issue. However, evidence suggests that Americans strongly support comprehensive sex education and believe that young people should be given information about how to protect themselves from unintended pregnancies and STIs. According to the results of a 2005-2006 nationally representative survey of U.S. adults, more than eight in 10 of those polled support comprehensive sex education (SIECUS, 2009).

Comprehensive approaches to sex education include age appropriate, medically accurate information on a broad set of topics related to sexuality including human development, relationships, decision-making, abstinence, contraception, and disease prevention (SIECUS, 2009). Comprehensive sex education programs use a holistic approach to provide adolescents with the tools to make informed decisions and build healthy relationships. Moreover, they teach youth the skills to make responsible decisions about sexuality, including how to avoid unwanted

verbal, physical, and sexual advances, and they encourage family communication about sexuality between parent and child.

Strong evidence suggests that comprehensive approaches to sex education help young people both to withstand the pressures to have sex prematurely and to have healthy, responsible and mutually protective relationships when they do become sexually active (Boonstra, 2010). In November 2007, the National Campaign to Prevent Teen and Unplanned Pregnancy released *Emerging Answers 2007*, an authoritative and comprehensive review of research findings on the effectiveness of HIV and sex education programs. This review of rigorously evaluated programs showed many positive results, including a delay or reduction in sexual activity, a reduction in the number of sexual partners, and increased condom or contraceptive use (Kirby, 2007). Furthermore, a series of studies show that the lessons learned in comprehensive sex education programs are critical for healthy decision making during the adolescent years and beyond, notably regarding condom and contraceptive use (Manlove, 2004; Schuster, 1998). To illustrate, in a 2007 study that explored recent declines in U.S. adolescent pregnancy rates, the evidence revealed that the majority of the decline (86%) between 1995 and 2002 was the result of dramatic improvements in contraceptive use (Santelli, Lindberg, Finer, & Singh, 2007). This approach to sexuality education is endorsed by leading public health and medical professional organizations, including the America Medical Association, the Society of Adolescent Medicine,

the American Academy of Pediatrics, and the American Public Health Association (Boonstra, 2010).

Beginning in 1981, conservative policymakers in the federal government explicitly supported abstinence-only-until-marriage sex education, although to date there is no evidence that it in fact delays adolescent sexual activity (Guttmacher Institute, 2012). Despite the lack of evidence, financial support for these unproven programs grew exponentially from 1996 until 2009, particularly during the second Bush Administration when an average of $176 million was earmarked for these programs annually. To date Congress has directed over $1.5 billion taxpayer dollars into abstinence-only-until-marriage programs. In spite of the fact that an overwhelming body of evidence has emerged over the past decade revealing the benefits of comprehensive sex education, the federal government consistently denied funding comprehensive sex education programs until 2010 (SIECUS, 2013a).

In his first budget request shortly after taking office in 2008, President Obama called for an end to ineffective sex education efforts focused solely on promoting abstinence outside of marriage, eliminating two-thirds of federal funding for ineffective abstinence-only-until-marriage programs. The federal government responded to the evidence and the urgings of the nation's leading medical and public health organizations and came out in support of programs that have demonstrated their effectiveness, and are age-appropriate and medically accurate. With

the support of Congress, the Obama administration ushered in a new era of sex education in the United States, and provided funding for initiatives that support evidence-based teen pregnancy prevention and more comprehensive approaches to sex education (SIECUS, 2013a).

In fiscal year (FY) 2010, President Obama and Congress earmarked nearly $240 million in funding for three federal programs targeting adolescent sexual health. Two of these programs were newly developed with the explicit purpose of supporting both evidence-based programs and innovative approaches to prevent unintended teen pregnancy and STDs, including HIV. The Teen Pregnancy Prevention Initiative (TPPI) represents the first federal funding stream that could be utilized for more comprehensive approaches to sex education (SIECUS, 2013a). In FY 2010, TPPI was granted $114.5 million to fund evidence-based, medically accurate and age-appropriate programs to reduce teen pregnancy and underlying behavioral risk factors.

Congress created the Personal Responsibility Education Program (PREP) in March 2010 as a provision of the recently passed health care reform legislation. Its stated purpose is to educate adolescents on both abstinence and contraception and to prepare them for adulthood by teaching such subjects as healthy relationships, financial literacy, parent-child communication and decision-making (SIECUS, 2013a). This program received $75 million in FY 2010.

Unfortunately, even as Congress threw its support behind comprehensive sex education, it also agreed per another provision in the health care reform legislation to fund the old Title V

abstinence-only-until-marriage program for five years at $50 million annually (Boonstra, 2010). As a result, the transformation of U.S. policy from an abstinence-only to a more comprehensive approach is substantial but not complete (Boonstra, 2010). Furthermore, conservative policymakers continue attempting to undermine the recent progress that has been made pertaining to adolescent sexual health. Recently, under the guise of deficit reduction, the Republican House majority targeted several programs that are dedicated to protecting and improving the health of Americans, including TPPI. Fortunately, TPPI only received a $5 million cut in funding rather than elimination, but the attack on this program indicates that conservatives in the Senate and the House are unwilling to accept the evidence in support of comprehensive sex education (SIECUS, 2013a).

Sexual health education programs in the U.S.

Public health researchers and practitioners recommend that children are educated about sexual health safety through a variety of channels. As described below, federally funded curriculum-based sexual health and STD/HIV education is typically delivered through two paths: schools and local community-based agencies.

School-based sexuality education. In the United States, schools have direct contact with more than 56 million students for at least 6 hours a day during 13 key years of their social, physical, and intellectual development (SIECUS, 2013b). For this reason, schools represent an

ideal setting for young people to learn about sexual health and safety. While parents and caregivers are considered the principle sexual educators of their children (SIECUS, 2004) it is recommended that school-based sexuality education complement and augment the sexuality education children receive from their families, in addition to religious and community groups, and health care professionals.

Supplementing the TPPI and PREP funding streams, the federal government also designates funds through the CDC's Division of Adolescent and School Health (DASH) to support HIV prevention efforts in our nation's schools. DASH provides funding and technical assistance to HIV/STD prevention programs in 49 states, the District of Columbia, 16 large urban school districts, six territories, and one tribal government. The funding and training resources go directly to state and local education agencies to help schools implement effective HIV-prevention programs that are based on best practices (SIECUS, 2013a). DASH also funds several scientific surveys that provide comprehensive data about young people's health risk behaviors, including the Youth Risk Behavior Survey (YRBS) and the School Health Policies and Programs Study (SHPPS). Funded at $40 million in FY 2011, DASH received a drastic funding cut of $10 million (25%) in FY 2012. This reduction in funds has hindered DASH's ability to provide vital training, resources, and technical assistance to education agencies across the country.

The School Health Policies and Program Study of 2006 highlights the material covered in required health education courses in U.S. high schools. The results indicate that: 87% taught abstinence as a the most effective way to avoid pregnancy, HIV and STDs; 28% taught eleven key pregnancy, HIV, or other STI prevention topics; 85% taught how HIV is transmitted; 65% taught about condom efficacy; 76% taught risks associated with teen pregnancy; and 58% taught methods of contraception (CDC, 2006).

The federal government does not have a direct role in local sexuality education. Rather, it leaves such control to state and local bodies. States for instance, can mandate that sexuality education be taught, require schools to teach about STDs or HIV/AIDS, set state-wide guidelines for topics, choose curricula, and approve textbooks. Currently, 20 states and the District of Columbia mandate both sex and HIV education (Guttmacher Institute, 2013). Notably, states with the highest teen pregnancy have inadequate sexual education in schools, as evidenced by a recent report from the Guttmacher Institute (2008). The majority of decisions about sex education policy, however, are made at the local level. Thus there is tremendous variation depending on where you live, and in most cases it's in the hands of the district.

National, state, and local polls have consistently found that an overwhelming majority of parents want schools to provide comprehensive education about sexuality that includes such topics as abstinence, STIs, HIV/AIDS, contraception, and disease prevention methods (SIECUS,

2010). However, in a recent (2010) study exploring public attitudes toward sex education in schools, the results revealed that Hispanics were significantly less likely to support sex education in public schools (Chappell, Maggard, & Gibson, 2010). The authors suggest that this finding may be attributed to the religious beliefs endorsed by many Hispanic populations, given their strong ties to the Catholic Church. In an earlier study, Mahoney (1979) found that those who opposed sex education held more traditional views toward family, women's roles, and premarital sex (Mahoney, 1979). These attributes are characteristic of traditional Latino cultural values, specifically *familism*, and gender role identity (including *machismo* and *marianismo*). Lack of support among Latino families for school-based sex education provides further evidence that discussions about sexual health and safety must occur elsewhere, preferably starting within the home.

School-based sexuality education – Colorado. According to the National Association of State Boards of Education, Colorado does not require students to receive instruction on HIV, STD, or pregnancy prevention education. The Colorado Comprehensive Health Education Act (2000), however, encourages school districts to teach about communicably transmitted diseases including HIV/AIDS/STIs. School districts that offer a planned curriculum concerning human sexuality are required to provide age-appropriate, medically accurate, and culturally appropriate education that is based on scientific research (National Association of State Boards of Education,

2010). Additional requirements indicate that instruction must encourage parental involvement and family communication (SIECUS, 2011b).

According to the 2008 Colorado School Health Profiles Survey, 73% of Colorado schools provide instruction to increase students' knowledge of HIV prevention and 70% of schools provide instruction on human sexuality (Colorado Department of Education, June 2009). However, an assessment conducted by the Colorado Organization on Adolescent Pregnancy, Parenting, and Prevention (COAPPP) found that the time spent on HIV prevention and sexuality education is insufficient in Colorado schools. And despite the state's requirement that human sexuality education be culturally sensitive, only 31.5% of participants on average, reported that non-English speaking students received sexuality instruction in their first language (COAPPP, 2010). This is especially troubling given Colorado's significant and growing adolescent Latino population.

Community-based sexuality education. Sexual health and education programs offered at community-based organizations are generally adolescent-focused or family-focused. The growing body of research on adolescent sexual risk prevention has increasingly recognized the critical role that parents play as sexual health educators of their children. Numerous studies recommend that pregnancy and HIV/STI prevention efforts aimed at adolescents should include parents in their interventions (K. S. Miller & Whitaker, 2001; Prado et al., 2007). Hutchinson et

al. (2003) suggest that parent and family-based sexual risk prevention can be viable alternatives to individual-based efforts.

The design and implementation of family-based approaches to improve parent-adolescent sexual risk communication as one means of reducing sexual risk behavior is frequently recommended in the research (Akers, Holland, & Bost, 2011; Pick, Givaudan, Sirkin, & Ortega, 2007; A. M. Villarruel, Loveland-Cherry, & Ronis, 2010). Sexual health and safety communication between parents and their children is explored in greater detail in the following section.

c. Sexual health and safety communication.

In this section I will review the literature on parent-adolescent sexual health and safety communication. This will include a review of salient characteristics identified in effective strategies, followed by a summary of the benefits demonstrated in research findings, and a description of factors that predict familial discussions about sex.

In a series of national surveys, The National Campaign to Prevent Teen and Unplanned Pregnancy recently explored factors that influence teens' decisions about relationships, sex, contraception, and pregnancy. Survey results underscore the influential role of parenting on adolescent's sexual decision-making process: 46% of teens surveyed said they were most influenced by their parents on decisions regarding sex, and 80% said that if they were able to

discuss sexual topics openly and honestly with their parents, it would be considerably easier for them to delay sexual activity. Among Latino teens, 55% reported that their parents influence their decisions about sex more than other sources, including friends, teachers, religious leaders, the media and internet, siblings, and other family members (Albert, 2010). Latino teens who live in homes in which English and Spanish are spoken equally are particularly likely to report their parents as the biggest influence on their decisions about sex (Sabatiuk & Flores, 2009).

Parents play a critical role in the lives of adolescents by guiding and shaping adolescent norms, attitudes, and behaviors related to sex, and thus directly and indirectly affecting their adolescents' health (A. M. Villarruel et al., 2010). Parents and guardians are considered the most important and principal sexuality educators of their children (SIECUS, 2004). For decades, public health researchers and practitioners have worked to increase parent-child communication about sexuality as part of their efforts to reduce the rates of teen pregnancy, STI and HIV infection (SIECUS, 2002). Effective parent-child communication about body safety and healthy sexuality is widely recognized as a protective factor against high-risk adolescent sexual behavior (DiIorio, Pluhar, & Belcher, 2003; Guilamo-Ramos & Bouris, 2009; Pick et al., 2007), and child sexual assault (Hebert, Lavoie, & Parent, 2002; Wurtele, Kast, & Melzer, 1992). Numerous studies have recommended the development and implementation of intervention strategies that

explicitly support parent-adolescent discussions about sexual health and safety (Guilamo-Ramos & Bouris, 2009; A. M. Villarruel et al., 2010).

Characteristics.

According to reviews of effective programs and curricula, and experts in the field of health education, an effective health education curriculum incorporates specific characteristics into its framework. Parent-adolescent sexual communication research draws upon these characteristics and explicitly recommends the following elements:

Developmentally appropriate. Ideally, parents will validate their child's particular stage of sexual development, provide them with age-appropriate information, share their values and family mores, state and reinforce age-appropriate rules, and teach them how to handle potentially harmful situations and make responsible and healthy choices (SIECIS, 2004).

Start early. As stated previously, many young people begin having sexual intercourse at early ages. Recent U.S. national data show that 32.9% of students in the ninth grade report having experienced sexual intercourse (CDC, 2012b). By the 12th grade, 47.4% of all students had ever had sexual intercourse. Overall, the prevalence was higher among Latino students (48.6%) than White students (44.3%).

A growing belief among prevention researchers emphasizes the provision of comprehensive, developmentally appropriate sex education provided by the parent well before

the adolescents' sexual debut (Jerman & Constantine, 2010). Early, age-appropriate conversations lay the groundwork for later discussions about issues related to sex that may require more detail and more depth (B. Krauss, 2009). Furthermore, this allows parents to establish a model of mutually shared information, values, and beliefs prior to the adolescent's task of confronting sexuality, autonomy and independence (Rosenthal & Feldman, 1999). Developmentally, teens become more autonomous and more self-assured as they get older. This decrease in parental influence makes it even more important for parents to talk to their children early and often about sex and relationships, in an age-appropriate way (Sabatiuk & Flores, 2009). Additionally, it may be considerably easier to instill a commitment to healthy sexual behavior (e.g., condom use) prior to sexual debut, rather than to later change established patterns of unsafe sexual behavior (Botvin, Baker, Dusenbury, Tortu, & Botvin, 1990).

On-going communication. In a recent (2009) survey on sexual communication between parents and their adolescents, Schuster emphasizes engaging in ongoing dialogue about healthy sexuality. Rather than waiting to have "the talk," Schuster suggests that recurrent communication will foster a comfortable environment to which the adolescent will return.

Research-based and theoretically driven. An effective curriculum has instructional strategies and learning experiences built on theoretical approaches that have effectively influenced health-related behaviors among youth. The most promising curriculum goes beyond

the cognitive level and addresses health determinants, social factors, attitudes, values, norms, and skills that influence specific health-related behaviors (Kirby et al., 2011). Researchers agree that theories and models help explain how behavior change occurs, and call for the use of proven social and behavioral theories in designing sound interventions. In their review of interventions designed to increase parent–child communication about sexuality, Kirby and Miller (2002) assert that effectively addressing barriers to family-based sexuality communication requires theoretically driven research and intervention.

Incorporates learning strategies, teaching methods, and materials that are culturally inclusive. An effective curriculum has materials that are free of culturally biased information but includes information, activities, and examples that are inclusive of diverse cultures and lifestyles (such as gender, race, ethnicity, religion, age, physical/mental ability, appearance, and sexual orientation). Strategies promote the values, attitudes, and behaviors that acknowledge the cultural diversity of participants (CDC, 2013).

Communication is culturally bounded, which may lead to particular types of communication patterns in Latino families. Importantly, communication style with youth may vary between Latina and White mothers due to differing underlying cultural values (Allen, Svetaz, Hardeman, & Resnick, 2008). For example, in a qualitative study comparing mother youth conversations between Latinos and Whites, authors attributed Latina mothers' greater

dominance in conversations to differing definitions of a satisfying family environment (Lefkowitz, Romo, Corona, Au, & Sigman, 2000). Authors conclude that given the value placed on children's respect and obedience toward their parents, the mother-dominated style may indicate that the family is close and gets along well. Intervention programs designed to improve parent youth communication must consider these culture specific communication styles.

Benefits.

For several decades, parent-adolescent sexual communication and its impact on adolescents' sexuality and self-protective behaviors has been the subject of investigation (Hutchinson, 2002; Lefkowitz et al., 2000; McKee & Karasz, 2006; Romo, Nadeem, Au, & Sigman, 2004). While results have been inconsistent, in part due to measurement and design flaws (Jaccard, Dodge, & Dittus, 2002), findings suggest that parents play an influential role in determining the course of their children's sexual behavior. CDC research has shown that early, clear parent-child communication regarding values and expectations about sex is an important step in helping adolescents delay sexual initiation and make responsible decisions about sexual behaviors later in life (CDC, 2013).

Among the benefits associated with open and supportive communication between parents and their adolescents are self-protected sexual behaviors such as delayed initiation of sexual activity (Jaccard, Dittus, & Gordon, 1996), increased use of contraceptives (Whitaker, Miller,

May, & Levin, 1999), and less sexual risk taking (Kotchick, Dorsey, Miller, & Forehand, 1999; K. S. Miller, Forehand, & Kotchick, 2000; Whitaker, Miller, & Clark, 2000). Furthermore, fostering sexual communication skills has been shown to increase youth self-efficacy and intentions to practice safe behaviors (Pick et al., 2007), characteristics that can influence the occurrence of sexual assault. Researchers have highlighted the benefits associated with effective parent-adolescent sexual health communication (Albert, 2010; Marhefka, Mellins, Brackis-Cott, Dolezal, & Ehrhardt, 2009). As a result, family dialogue about sexual health and safety is recurrently identified as a protective factor against high-risk adolescent sexual behavior (Guilamo-Ramos & Bouris, 2009; Pick et al., 2007).

Predictors of sexual health communication.

Numerous studies have associated parent–adolescent communication about sexual health with decreased sexual risk behaviors, yet factors influencing such communication merits further investigation (Marhefka et al., 2009). Understanding the vital processes that underlie sexual dialogue is critical for the development of effective, family-based interventions to increase parent–child communication, promote adolescents' healthy sexual development, and decrease adolescents' sexual risk.

Understanding what motivates parents to initiate conversations with their children about sexual health allows researchers and providers to develop more effective interventions (Buhi &

Goodson, 2007). According to a 20-year synthesis of the parent-child sexual communication literature, a number of critical factors emerged as being significantly predictive of sexuality discussions. These include the quality of general communication, parents' knowledge of sexual health, parents' confidence, and comfort discussing sexuality (DiIorio et al., 2003). The present study will employ these sexual communication predictors as outcome variables, with one modification. The confidence variable will be replaced with the variables self-efficacy and outcome expectancy.

According to Bandura's social learning theory, self-efficacy refers to one's alleged confidence in being able to perform a specific behavior (Bandura, 1997). Much of the literature examining factors that predict parent-child sexual communication employ the self-efficacy construct. Closely related to self-efficacy is the concept of outcome expectancy, which refers to the outcome expected to occur upon attempts to perform a behavior. Bandura posits that because self-efficacy determines the initiation of coping behavior, it is the most important precondition for behavioral change (Bandura & Cervone, 1986). He states, however, that behavior is best predicted when both self-efficacy and outcome expectations are considered (Bandura, 1982).

Lastly, parents' intention to discuss sexual health with their child will also be measured as an outcome variable. A large body of literature supports the notion that one's intention to perform a behavior significantly predicts one's future behavior, consistent with the theory of

planned behavior (Guilamo-Ramos, Jaccard, Dittus, & Collins, 2008; Webb & Sheeran, 2006). As such, theoretically-driven research has explored the predictive value of adolescent's intentions to engage in sexually risky behavior (Guilamo-Ramos, Jaccard, Dittus, Gonzalez, & Bouris, 2008). Intention has also been measured in parent-child sexual communication research (Koblinsky & Atkinson, 1982), most recently sampling a Latino population (Kenny & Wurtele, 2013). Their findings highlight the discrepancies that exist between the age at which a parent intends to discuss specific sexual issues with their child, and the ideal age to have these discussions according to family life educators.

In total, the following seven sexual health communication predictors served as outcome variables: 1) comfort discussing sexual health and safety; 2) self-efficacy; 3) outcome expectancy; 4) quality of general communication: conversation; 5) quality of general communication: conformity; 6) knowledge of sexual health; and 7) intention to discuss reproductive and sexual health. Frequency of sexual health and safety communication was included as an eighth outcome variable. Cumulatively, these eight outcome variables represent "sexual communication findings" in the model.

A growing body of evidence indicates that sexual communication predictors are modifiable (Pluhar, DiIorio, & McCarty, 2008), and can be addressed by intervention programs (Guilamo-Ramos, Jaccard, Dittus, & Collins, 2008). An important recommendation by Pluhar

(2008) and others (Byers, Sears, & Weaver, 2008; DiIorio et al., 2003) emphasizes the need to address the factors that influence sexual communication predictor variables. The present study hypothesized that Latino cultural beliefs, attitudes, and values would influence the recognized sexual communication predictors and empirically explored these relationships.

II.II. Sexual Risk Prevention in the Context of Latino Culture

As stated earlier, sexual risk prevention efforts have generally been designed without consideration of culture, and are undoubtedly failing some Latino adolescents. The external validity of interventions that were developed and evaluated by non-Latino White samples is questionable when applying the intervention to ethnic minority samples. It is becoming increasing apparent that culturally appropriate sexual health research and practice is warranted to more effectively address the needs of Latino adolescents. At present, empirical support for the utility of prevention programs for Latino adolescents is emergent, but limited. In this section, the empirical research on Latino adolescent sexual risk prevention is explored in the context of practice and theory.

a. Family-based initiatives.

One of the most universal values endorsed by Latinos is family unity. Because the family is such a critical aspect in the lives of Latinos, there is a significant reliance on the family for material and emotional support (G. Marin & Marin, 1991). Family unity is an important

principle endorsed by Latino subpopulations, and is embodied in the cultural value *familismo*. In contrast to individualism, which is less valued in Latino cultures, family unity is often perceived as critical to successful adaptation in the United States. Taking into consideration the significance of *familismo* among Latino families, it is recognized that parents have the potential to positively impact the sexual health behaviors of their children, given their ability to effectively educate and communicate with them about sexual risk (Rios-Ellis, 2012). Research demonstrates that Latino families play a major role in forming both adolescent sexual attitudes and contraceptive behaviors (Prado et al., 2007). A review of prevention and intervention programs reveals that family-based interventions are the most effective for Latino populations (G. Marin & Marin, 1991; Szapocznik, Prado, Burlew, Williams, & Santiseben, 2007). Moreover, in comparison to strategies that predominantly emphasize adolescents' individual behavior, Marin and Gomez suggest that family-based interventions will likely be well received among Latino parents and their children (B. Marin & Gomez, 1997). Given the importance of family among Latinos regarding sexual risk prevention, the interventions that specifically include parents as agents of change will be the focus of this review.

Presented below is a description of theoretically guided, evidence-based sexual risk prevention initiatives that have been designed explicitly for Latino adolescents and their families. In their extensive review of the electronic literature published from 1995 through 2010,

Villarruel, Guilamo-Ramos, and Bauermeister (2012) found that relatively few interventions targeting Latino parents were identified that included sizeable proportions (25% or more) of Latino parents and adolescents. All of the initiatives that were included in the present analysis incorporated parent-adolescent sexual communication into their organizing frameworks. Of the seven programs, six specifically identified increasing or improving parent-adolescent communication as one of their program's objectives.

Familias Unidas.

Familias Unidas is a parent-centered intervention that is based on the assumption that parental involvement, positive parenting, parent–adolescent communication, and family support are essential to promoting positive adolescent development and to preventing substance use and unsafe sex (Pantin et al., 2004). It is one of the few interventions that are effective in increasing parental involvement, positive parenting, and family support in Latino families (Szapocznik et al., 2007). Consistent with cultural expectations, *Familias Unidas* places parents in positions of leadership and expertise and builds on Latino values, such as importance of family, sanctity of parental authority, and roles of parents as the family's leaders and educators. Latino cultural beliefs are integrated into all aspects of the intervention, from the underlying theoretical model to the specific content of the intervention to the format of the intervention activities (Pantin, Schwartz, Sullivan, Coatsworth, & Szapocznik, 2003).

Familias Unidas is guided by ecodevelopmental theory (Prado et al., 2007; Szapocznik & Coatsworth, 1999). Consistent with this theory, the intervention aims to prevent substance use and sexual risk behaviors by (a) increasing parental involvement in the adolescent's life, (b) increasing family support for the adolescent, (c) promoting positive parenting, and (d) improving parent–adolescent communication. The program consists of nine 2-hour group sessions that focus on sharing with parents the skills and knowledge necessary to effectively raise adolescents in the United States. Evaluation results indicated that adolescents whose parents who were randomly assigned to the intervention were significantly more likely to have used a condom in the past 90 days from the 6-month to 30-month post-baseline assessment in comparison to those in the control group (Pantin, Prado, Lopez, Huang, & Tapia, 2009).

Familias Unidas + PATH.

Parent-Preadolescent Training for HIV Prevention (*PATH*) is a theoretically-based HIV prevention curriculum designed to promote responsible sexual behavior by training parents to become effective HIV educators for their children (B. Krauss et al., 2000). It is designed to increase parents' and adolescents' knowledge about HIV and to promote parent–adolescent communication about HIV risks. *PATH* was originally designed for a multicultural sample that included Latinos and was later adapted specifically for use with a Latino sample. One example of a cultural adaptation is the use of an induction video that used a Spanish telenovela, the

equivalent of an American soap opera, to address the cultural taboos regarding discussing sexuality or HIV.

PATH was coupled with *Familias Unidas* and the efficacy of this joint endeavor in preventing adolescent substance use and unsafe sexual behavior was tested in a randomized controlled trial. Participants were assessed at baseline and at 6, 12, 24, and 36 months post baseline. Results demonstrated that *Familias Unidas/PATH* was efficacious, relative to the control condition, in reducing unsafe sexual behavior, including increased condom use and reduced incidence of STDs. The effects of this intervention were partially mediated by improvements in family functioning, which suggest that strengthening the family system, rather than targeting specific health behaviors, may be most efficacious in preventing and/or reducing cigarette smoking, illicit drug use, and unsafe sex in Latino adolescents (Prado et al., 2007)

Cuidalos.

Cuidalos is a computer-based intervention designed to increase parent-adolescent communication among Latino parents and adolescents (A. M. Villarruel et al., 2010). The program consists of two 60-minute sessions delivered via computer. The focus of the curriculum is on activities that would build communication self-efficacy, which includes providing a strong baseline knowledge of pregnancy, STDs and HIV/AIDS (presented in video format). Also, homework is assigned providing opportunities for skills practice.

The efficacy of *Cuidalos* was tested in a randomized controlled trial (A. M. Villarruel et al., 2010). The study's purpose was to examine among Latino parents the efficacy of an intervention that was computer-based, conducted in a community setting, and designed to increase the general communication, sexual communication, and comfort communicating with their adolescents. Parents in the control group reported greater general communication as well as greater sexual communication at 3 month follow up in comparison to parents who did not participate in the intervention. Also, adolescents whose parents were participants reported higher sexual communication and greater comfort with communication than did adolescents whose parents did not participate. Results provide support for the efficacy of brief parent interventions designed to maximize adolescent support systems.

Ecodevelopmental theory was used as an organizing framework to incorporate the individual, family, and cultural interrelationships addressed in the intervention. As parent-adolescent communication constitutes the core of the intervention, it was guided by the principles of the theory of reasoned action and the theory of planned behavior.

Families Talking Together.

The *Families Talking Together* program is a short-term, parent-based sexual risk reduction intervention developed for Latino and African American adolescents in New York City (A.M. Villarruel et al., 2012). It consists of 30-minute, clinic-based interventions in addition to

two follow-up booster calls over the ensuing 5 months. The focus of *Families Talking Together* is on conveying effective communication and parenting strategies for reducing adolescent sexual risk behavior. Mother-adolescent dyads completed a brief baseline survey and were then randomly assigned to one of the following two conditions: (1) a parent-based intervention, or (2) a "standard care" control condition. The research found that transitions to sexual intercourse were significantly lowered as a result of the intervention. Specifically, sexual activity increased from 6 to 22% for young adults in the control condition, while it remained at 6% among young adults in the intervention condition at the 9-month follow-up. *Families Talking Together* is grounded in the unified theory of behavior, a theoretical model that has been employed by prevention efforts to predict specific risk and problem behaviors (Guilamo-Ramos, Goldberg, Lee, McCarthy, & Leavitt, 2012).

Saving Sex for Later.

Considered a promising strategy for addressing early sexual initiation, parent education is a pivotal component of *Saving Sex for Later* (O'Donnell, Stueve, Agronick, Wilson-Simmons, & et al., 2005). This initiative recognizes the primary role of parents in supporting their adolescent's sexual risk- taking behaviors, as highlighted in the literature. The program is presented on three 25-minute audio CDs, containing role-model scenarios to help parents identify "teachable moments" to talk with their adolescent about values and expectations, set

rules, and respond appropriately to their child's development. They also demonstrate how parent-child dialogue progresses as the child gets older. To test the efficacy of *Saving Sex for Later*, a randomized trial was conducted between 2003 and 2005 in collaboration with the New York City public schools. The sample consisted of 846 adolescents, the majority of whom were between 10-11 years (83%). Sixty four percent identified as black and 29% as Latino. Parents in the intervention group received the three CDs in 10-week intervals. At follow up, the parents in the intervention group were significantly more likely than parents in the control group to report an increase in general parent-adolescent communication, communication about targeted behaviors, self-efficacy to discuss sexuality, and perceived influence over adolescents' behaviors. *Saving Sex for Later* is guided by social development theory, diffusion of innovation theory, and the theory of planned behavior.

Especially for Daughters.

Especially for Daughters is a parent-adolescent intervention that was developed specifically for girls (O'Donnell, Myint, Duran, & Stueve, 2010). Its purpose is to provide urban Black and Latino parents with information and skills to support their daughters in delaying sexual initiation and alcohol use. This randomized field trial consisted of a set of audio CDs mailed home. Girls completed classroom baseline and three follow-up surveys, and telephone surveys were conducted with parents. At follow-up, girls in the intervention reported fewer

sexual risks and less drinking. Their parents reported greater self-efficacy to address communication regarding alcohol and sex. This gender-specific parent education program was for communities with high rates of HIV, where early sexual onset is common and often fueled by alcohol. *Especially for Daughters* is based in the theory of planned behavior, behavioral learning theory, diffusion of innovation theory, and social development model.

Rompe el Silencio.

Rompe el Silencio [Break the Silence] was developed as an HIV prevention pilot intervention that sought to improve both sexual risk knowledge and communication among family members as well as between sex partners (Rios-Ellis, 2012). Its development was informed by findings generated by focus groups with Latina mothers and their adolescent daughters. It was also guided by a combination of elements derived from many of the important social cognitive theories currently in use in HIV prevention. These theories included social cognitive theory, the theory of planned behavior, and the information-motivation-behavioral skills model. The theoretical model used addresses critical factors that significantly influence risk behavior, including behavioral beliefs, normative beliefs, social support structures, and personal/environmental barriers and facilitators. These factors are mediated by the action of cultural influences, including appropriate gender roles, the importance of the family, and respect for elder family members. Based on the Latino health communications model, the cultural

factors *familismo, confianza*, and *respeto* were integrated into all aspects of the intervention to support the positive cultural characteristics that influence resiliency among Latinos (Rios-Ellis, 2012).

Rompe el Silencio was designed to incorporate an intergenerational approach to achieve the following objectives: (1) increase knowledge of sexual risk, (2) increase recognition of cultural factors that impact risk, (3) increase parent-adolescent communication about sex, and (4) increase skills and self-efficacy in risk reduction. The pilot study was comprised of 50 Latina female family dyads from Los Angeles County.

The intervention was conducted in two sessions totaling 8 hours, including an introduction and two educational modules per session. Throughout each module, culturally relevant constructs were discussed and *dichos* (common sayings) and Latino-specific beliefs incorporated throughout the curriculum. Data were collected from participants using pre- and post-intervention, self-response surveys. Results demonstrated significant changes in HIV knowledge (pre- vs. post-intervention) among both the adolescents and the mothers. Significant results were also found among the mothers regarding their communication comfort level. This study demonstrated that effectively addressing Latina-specific contextual factors resulted from the integration of important concepts from behavioral theories with cultural strengths, giving credibility to characteristics of culturally related resiliency such as *familismo*, *confianza*, and

respeto without vilifying or stereotyping behavioral manifestations such as *machismo* and *marianismo*.

b. Results of research and practice.

Cultural values have been shown to play a role in the way parents socialize their children (Halgunseth et al., 2006). Researchers have suggested that the socialization goals of a cultural group influence their parenting practices (Bronstein & Cote, 2003). Latino families are characterized by a collectivistic orientation that entails a greater concern for family values, family well-being, and importance of interpersonal relationships rather than individual needs (Sue & Sue, 2003). This concept is embodied in *familismo*, a widely-held and integral cultural value that emphasizes the family as the primary source of social support and identify (Raffaelli & Ontai, 2004). The core Latino value of *familismo* necessitates a family-based approach to adolescent care and preventive services that considers the values and dynamics of Latino families. This requires inclusion of parents and other family in decision-making and consideration of parental authority more than might be necessary for other cultural groups (Allen et al., 2008). Given the emphasis on family unity among Latino populations, emerging research findings strongly support the significance of families in sexual risk prevention efforts (Szapocznik et al., 2007).

Engaging Latinos in family-based HIV prevention initiatives, however, may be associated with specific challenges, in light of the complex cultural processes and experiences families face. Yet this is a critically important task given the degree of sexual risk faced by Latino adolescents. While family is at the core of being Latino, Latino parents need guidance when it comes to communicating with their children about difficult topics (Lescano et al., 2009).

c. Cultural barriers to sexual communication among Latino families.

A number of studies have explored the impact of Latino culture on a wide array of sexual health behaviors (Driscoll et al., 2001; Guilamo-Ramos, Bouris, Jaccard, Lesesne, & Ballan, 2009; Sabatiuk & Flores, 2009), including condom use (VanOssMarin, Gomez, Tschann, & Gregorich, 1997). The impact of Latino cultural beliefs specifically on parent-adolescent sexual communication has also been investigated (Guilamo-Ramos, Dittus, et al., 2006; Guilamo-Ramos, Jaccard, Dittus, & Collins, 2008; Sabatiuk & Flores, 2009). Generally, findings reveal that Latino parents encounter barriers to engaging in conversations with their children about sexual health and safety, despite a strong desire to communicate (Allen et al., 2008; Guilamo-Ramos, Dittus, et al., 2006). Research on these barriers informs us that cultural ideals may influence effective dialogue about sexual health between parents and their children.

Carrillo (2002) describes the concept of "sexual silence" in Latino families in which topics of a sexual nature remain largely unspoken, particularly among women who endorse the

cultural construct *marianismo*. Results of focus group exploratory studies on sexual communication between Latino parents and adolescents reveal that sexual issues are considered to be too intimate to discuss, even among family members (Kenny & McEachern, 2007; Levy, 1988). Meneses and colleagues found that Latina mothers demonstrated the highest levels of discomfort and infrequent communication among study participants (Meneses, Orrell-Valente, Guendelman, Oman, & Irwin, 2006). A number of studies have identified specific Latino cultural values that were linked with sexual risk behaviors, including the role of the family, rigid gender roles including *machismo* (masculinity), religion, *personalismo* (personal relationships), and *respeto* (Driscoll et al., 2001).

Guilamo-Ramos, Jaccard, Dittus, & Collins (2008) found significant correlations between parent/adolescent sexual communication and expectancies about lacking knowledge, embarrassment, emotions about feeling comfortable, and self-efficacy. They assert that nearly all of the factors associated with limited sexual communication frequency can be addressed with effectual intervention. In addition, the authors recommend that further research identifying family and cultural variables, and examining how they can be used to support sexual communication efforts is warranted.

Guilamo-Ramos and colleagues recently explored potential barriers to communication among Latino mother-adolescent dyads, embedded in both the content and process of discussion

(2006). While acknowledging that Latino culture is not supportive of open discussion about sex in the home, their findings reveal a willingness on the mother's part to communicate with their adolescents about the risks associated with premature sexual activity. In other studies, parents identified concern for their adolescent's socioeconomic future and life opportunities as a factor warranting family discussion (Gonzalez-Lopez, 2004; McKee & Karasz, 2006). These findings suggest that being raised in a culture of traditional, conceivably religious conservatism and extreme reticence about sexual matters, does not inevitably preclude Latino parents from conveying a message of sexual safety to their children. Given the inconsistent results achieved regarding parent-adolescent communication about sexuality and body safety among Latino families, further research is warranted that clarifies these effects, as well as explores the influence of culture on the sexual communication exchanges between Latino parents and their younger children.

II.III. Research Gaps in the Literature

Empirical analysis of Latino culture.

While this body of culturally relevant sexual health research denotes progress, additional studies are warranted to address several noteworthy gaps. First, the measurement of Latino cultural constructs in sexual health research has generally occurred in a global context whereby connections to specific behaviors are not identified (Guilamo-Ramos et al., 2009). Raffaelli

(2009) asserts that Latino culture is often acknowledged in the sexual health literature, yet adherence to cultural norms is rarely measured. Without data, conclusions about how cultural values influence sexual communication cannot be drawn. A handful of qualitative studies indicate an association between Latino culture and sexual communication predictors (Albert, 2010; Guilamo-Ramos & Bouris, 2008; Guilamo-Ramos, Dittus, et al., 2006; Noland, 2006), although subsequent empirical testing of these relationships has not occurred. The present research operationally defined elements of Latino culture using quantitative, self-report measures, and empirically explored how cultural values and beliefs influence parents' sexual communication predictive behaviors. Generating empirical data will allow researchers and practitioners to identify specific aspects of Latino culture that are most relevant to parent-adolescent sexual communication research and intervention.

Influence of behavioral acculturation.

Studies have shown that acculturative status can influence the cultural beliefs and attitudes among Latino parents, specifically regarding sexuality and gender role identity. Research has demonstrated that elements of parenting, including communication style, are influenced by one's cultural background. Driscoll and colleagues assert that the manner in which communication is handled within the family, and the topics that are addressed constitute family processes that are significantly shaped by cultural values (2001). Differences that emerge

are influenced by a variety of factors including acculturation levels (Elliott & Urquiza, 2006). Research suggests that the effects of acculturation on child rearing beliefs and practices among different Latino groups warrants further understanding (Gonzalez-Ramos, Zayas, & Cohen, 1998; Harwood, 2002). In the present study, I examined variations in the effect of cultural beliefs on parents' sexual communication behaviors that may be due to acculturative status. According to recent research generated by the National Campaign to Prevent Teen and Unplanned Pregnancy, understanding the effect of acculturation on sexual beliefs and behavior can support practitioners and educators in their efforts to create more effective messages and outreach strategies for Latino teens, their families, and their communities (Sabatiuk & Flores, 2009).

Early intervention.

Research on sexual communication has focused predominantly on parents and their early adolescents with the goal of intervening prior to the preadolescent's sexual debut. A number of researchers argue that parents should begin laying the foundation for open communication considerably earlier (Beckett et al., 2010; Byers et al., 2008; Marhefka et al., 2009; Pick et al., 2007). Results of a recent study show that adolescents are engaging in sexual activity far earlier than predicted by their parents (Marhefka et al., 2009). According to the CDC's 2011 Youth Risk Behavioral Survey, 6.2% of students nationwide reported first sexual intercourse before age

13 (CDC, 2012b). These results are particularly troublesome for mothers and fathers who wait to have "the talk" with their adolescent until they believe they are sexually active. Evidence suggests that adolescents' sexual debut is generally poorly predicted by mothers (Marhefka et al., 2009). To illustrate, among teens recently surveyed in a study on parent-adolescent sexual communication behaviors, nearly half indicated that they had sexual intercourse before their parents talked with them about birth control and STIs (Beckett et al., 2010). These findings underscore the importance of initiating a dialogue about healthy sexuality and body safety well before adolescents are expected by parents to sexually debut.

While the American Academy of Pediatrics (2001) and the Centers for Disease Control and Prevention (2003) recommend that parents begin educating their children about sexuality early in life, studies examining parent-child discussions regarding body safety and sexuality are notably scarce. In a review of the literature on parent-child sexual communication (1980-2002), it was observed that only one study (out of 95) focused on children between the ages of 6 and 11 (data was not captured on race/ethnicity, however). The majority of studies sampled adolescents between 11 and 18 years of age (DiIorio et al., 2003). Of the extant research on this topic, most results demonstrate infrequent communication with younger children (DiIorio et al., 2003; Jean, Bondy, Wilkinson, & Forman, 2009; Pluhar et al., 2008). DiIorio and colleagues identify sexual communication between parents and children under the age of 11 as a research topic critically

warranting further research. Given the dearth of sexual communication literature on Latino parents and their young children, coupled with the early onset of sexual activity among Latino youth, this study addressed a significant gap in the research by sampling Latino parents with children between the ages of 5 and 14.

II.IV. Overview of and Relationships Between Study Variables

a. Direct effect (predictor) variables.

Cultural generalizations about an ethnic group as diverse as Latinos are problematic; however, as indicated earlier, there are a number of core cultural values that are central in the consideration of how family influences adolescent behavior. Adherence to these values likely depends on socioeconomic status, the specific Latino population considered, and the acculturation levels of both the parent and the adolescent (Allen et al., 2008). In this section, the cultural constructs that were explored as direct effect variables in the hypothesized model will be presented. They include *respeto, fatalism, machismo* and *marianismo.* These constructs are frequently endorsed by individuals of Mexican-origin (Cuellar, Arnold, & Gonzalez, 1995; Gonzalez-Lopez, 2004), and (as discussed below) potentially influence factors that predict parent-child sexual communication. Presented below is a general description of these four variables. Given the lack of empirical research on these cultural constructs, most of the information presented in this section is descriptive in nature.

Respeto.

The cultural variable *respeto* denotes respect and empathy within interpersonal relationships. In the context of parenting, members of Latino cultures traditionally expect children to be respectful, obedient, and loyal to their parents and elders (Lefkowitz et al., 2000). Children are taught for instance, not to question adult authority as this is viewed as a disruption of established order (Garcia-Prieto, 1996). Research suggests that Latino mothers place a higher level of importance on transmitting dimensions of respect (i.e.: good behavior, obedience) to their children than personal development (i.e.: self-confidence, independence).

Research on the parenting and socialization behaviors of Latino parents implies that endorsement of *respeto* may influence the nature of both general family communication and sexual health communication. For instance, evidence suggests a negative association between *respeto* and autonomy granting, which refers to parenting behaviors that permit or encourage children to express themselves in the family. Bulcroft, Carmody, and Bulcroft (1996) revealed that in comparison to parents of White adolescents, parents of Latino youth exerted less autonomy granting as a means of enforcing the value of *respeto*.

Fatalism.

In contrast to the dominant U.S. culture that emphasizes individual control and responsibility, many Latino cultures have an external locus of control, believing that their

destinies are beyond their influence (Cuellar, Arnold, & Gonzalez, 1995; Fontes, 2007). A low sense of control may be attributed to culturally fatalistic beliefs associated with Catholicism, the predominant religion in Mexico. This belief presumes that individuals are guided by fate and have no power over their future outcomes (Benavides, Bonazzo, & Torres, 2006). Individuals of Mexican-origin are commonly considered to have a fatalistic perspective of life and health (Kurzon, 2000). In fact, many ascribe to the ideal that "God controls all" (Kurzon, p.2). With regards to sexual risk, Marin et al. (1993) found that Spanish-speaking Latinos have less positive attitudes about condom use and believe that they cannot do anything to avoid AIDS as compared to European Americans. Albert (2010) recently explored the impact of fatalism on adolescent sexual health in a national survey on teen pregnancy prevention. Results revealed that 34% of teens agree that "it doesn't matter whether you use birth control or not, when it is your time it will happen" (p. 5).

Gender role attitudes: machismo and marianismo.

Gender roles dictate how men and women are supposed to think and behave. Research tells us that these roles are clearly defined within family dynamics and endorsed through socialization processes (Caceres-Dalmau, 2003). Within the gender role ideologies of Mexican descent individuals, two concepts have emerged in the literature: *machismo* and *marianismo.*

Machismo is the traditional gender role ascribed to men of Latino origin. This construct has been characterized as possessing positive traits such as courage, strength, and independence. However, it is more commonly associated with negative traits that include violence, overbearing control, and sexual aggression (A.M. Villarruel et al., 2004). It is also associated with aggressiveness, authoritarian behavior, being sexually discriminative, and a strong adherence to rigid sex roles (Ferrari, 2002). Furthermore, macho men are often characterized as polygamous, unfaithful and sexually experienced (Cianelli, Ferrer, & McElmurry, 2008).

The male assumes the dominant role in the household while the female's role is submissive, an attribute that is embodied in the complementary traditional gender construct *marianismo* (Guilamo-Ramos, Dittus, et al., 2007). Based on this role, women are expected to sacrifice themselves for the well being of others, be pure, nurturing, humble, and spiritually stronger than men (Vazquez Garcia, Garcia Coll, Erkut, Alarcon, & Tropp, 2000). Comas-Diaz (1988) states that gender roles are central to a Latina's development of her identify. Attributes that characterize *marianismo* include high levels of interdependence, conformity, and a readiness to sacrifice for the welfare of others (G. Marin & Marin, 1991). According to Fontes, Latino families may encounter a *machismo*/*marianismo* double standard (Fontes, 1995). The code of *machismo* may prompt Latino males to view sex as an opportunity to prove their virility and masculinity. In contrast, Latina females are socialized to be virtuous and self-sacrificing,

attributes exemplified by the Virgin Mary. Their "role model" also emphasizes virginity and non-sexuality, traits that Latina women are expected to endorse (Rivera Marano, 2000). In a study on sexual abuse among Hispanic families (Kenny & McEachern, 2007), the majority of female participants (67%) reported that there were no discussions of sex in their homes during their youth. In virtually all families, there was an understanding that women were to remain virgins for marriage, and that sex was not a common subject of discussion. Numerous researchers contend that Hispanic women are generally discouraged from discussing sexual matters (Fontes, 2005, 2007; VanOssMarin et al., 1997). For many Latina women, simply mentioning genitals or sexual acts is considered muy bajo or "vulgar" (Fontes, 2007 p. 65). Noland (2006) supports this argument, revealing in her research the sentiment that women who talk about sex are considered promiscuous. Most commonly, a female having sexual intercourse outside of marriage is labeled "a bad woman" or "a whore."

b. Outcome variables.

As stated previously, the constructs that have been included as outcome variables in the present study were selected based upon a rigorous review of the empirical literature. The factors that were designated for inclusion were explicitly identified in the research as being predictive of sexual communication between parents and their children/adolescents. Presented below is a description of the seven sexual health communication predictors that served as outcome

variables, followed by evidence of the relationship between predictor and sexual communication behavior. Frequency of sexual health communication represents the eighth outcome variable, and is also described below.

Comfort.

Research on sexual communication recognizes that parents are considerably less comfortable discussing issues of a personal nature as opposed to biological topics (Koblinsky & Atkinson, 1982; Rosenthal & Feldman, 1999; Sabatiuk & Flores, 2009). Variation in parents' behavior by sexual health topic underscores the importance of addressing the content of parent-child sexual communication (Byers et al., 2008; Fox & Inazu, 1980), in addition to frequency.

Evidence of a relationship between comfort and parent-child sexual communication.

Multiple investigations have found that parents' comfort with sexuality communication influences their communicative behavior on sexual issues with their children (Byers et al., 2008; DiIorio et al., 2003; Driscoll et al., 2001; Eastman, Corona, & Schuster, 2006; Jaccard, Dittus, & Gordon, 2000). Overall, greater comfort with discussing sexual matters is associated with a higher likelihood of engaging in such discussions (Byers et al., 2008; Pluhar et al., 2008). Actual sexual behavior is also influenced by this factor as evidenced by a 2003 study on the impact of comfortable sexual communication among Latino adolescents (Guzman et al., 2003). Results indicate that comfortable sexual discussion is predictive of reduced likelihood of being sexually

active, delayed initiation of sexual intercourse, and greater intentions to delay intercourse (Guzman et al.). Attributes that characterize comfortable sexual communication include the following: openness, encouraging questions, making a concerted effort to make one's child feel comfortable, initiating sexual communication at an early age, and discussing sexuality like any other health issue (Feldman & Rosenthal, 2000).

Self-efficacy and outcome expectancy.

Albert Bandura posits that behavioral reactions are determined by one's expectations. Bandura identified two distinct types of expectations in his research: self-efficacy and outcome expectancy. According to social cognitive theory, people who maintain strong beliefs in their capability of organizing and executing behaviors (self-efficacy) that lead to desired outcomes are more successful in achieving those outcomes than those who are uncertain about their capabilities (Bandura, 1997). This concept is highly applicable to parent-child sexual communication. To illustrate, a mother who feels confident that she can talk to her son about spontaneous erections is more likely to explain these physiological events to her son than a mother who believes that the obstacles to such a discussion are too difficult for her to overcome (DiIorio et al., 2001). Outcome expectancy is defined as a one's estimation that a given behavior will lead to certain outcomes. People who associate positive outcomes with performance of a specific behavior are more likely to attempt to perform the behavior and to persevere if they are

not initially successful (Bandura, 1997). To illustrate the applicability of this concept to familial sexual communication, a mother who believes that talking to her son about sexual responsibility will reduce his chances of impregnating a girl is more likely to talk with him than a mother who believes such discussions will be interpreted as her approval for her son to have sexual intercourse (DiIorio et al., 2001).

Evidence of a relationship between self-efficacy and parent-child sexual communication.

Numerous investigations have identified lack of confidence in their abilities to discuss sexual issues with their children as a major deterrent among parents (Brock & Beazley, 1995; Campis, Prentice-Dunn, & Lyman, 1989; DiIorio et al., 2000). In two separate studies (2000, 2008), DiIorio and colleagues found that greater self-efficacy in sexuality communication was associated with increased sexual communicative behavior. In earlier research (Burgess & Wurtele, 1998; Campis et al., 1989), the contribution of self-efficacy in predicting parents' intentions to inform their children of sexual abuse was explored. Their findings suggest that self-efficacy represents the most powerful variable in persuading parents to communicate with their children about inappropriate sexual contact.

Evidence of a relationship between outcome expectancy and parent-child sexual communication.

Evans and colleagues (2011) explored the message features of a national public health campaign designed to increase parent-child sexual communication (The Parent's Speak Up National Campaign). The outcomes measured included: 1) parents' efficacy to talk to their child about sex; 2) short-term expectations about their child's response to parent communication about sex; and 3) long-term expectations about the impact of parent-child communication on their child' s future success in life. The results suggest that increased parent-child communication is mediated by higher parental outcome expectations and that such communication successfully reduced sexual risk behaviors in the child (Evans, Davis, Umanzor, Patel, & Khan, 2011). And in a study exploring social cognitive factors associated with mother-adolescent communication about sex, mothers who reported more positive outcomes associated with talking about sex were more likely to do so (DiIorio et al., 2001).

General communication: conversation and conformity.

Every family has a general approach to the way in which they communicate with one another that can be encapsulated by family communication patterns. These patterns that form from family dialogue can provide insight regarding the relationship between family members. Based on research by McLeod and Chaffee (1972), Fitzpatrick and Ritchie (1994) developed a model of family communication patterns that conceptualized two orientations, "concept" and "socio," subsequently re-named conversation orientation and conformity orientation, respectively.

Conversation.

The term conversation orientation describes a climate in which all family members are encouraged to participate in unrestrained conversation about a wide range of topics (Koerner & Fitzpatrick, 2002). Parents with a conversation orientation will likely promote individuality, openness, and freedom among their children, and will encourage the open exchange of ideas and feelings (Ritchie & Fitzpatrick, 1990). Within a conversation oriented family, parents will likely be willing to discuss reasons for their belief system and will be curious as to the thoughts that their children may hold on the issue of premarital sex.

In the context of parent-adolescent sex communication, families with a high degree of conversation orientation will encourage unlimited topic discussion and will spend a great deal of time together sharing individual ideas, thoughts, and feelings (Koerner & Fitzpatrick, 2002). When discussions about sex occur, each family member will likely have the opportunity to express his or her opinion. Families low in conversation orientation find that family decisions are not discussed in detail and there is less opportunity to express individual thoughts and ideas. Moreover, when discussions about sex occur, the parents' ideas about sex are emphasized with little, if any, discussion.

Conformity.

The term conformity orientation emphasizes the amount of conformity that occurs within

the family with great pressure to comply with the common values of the family (Koesten, 2004). For example, a parent who believes that sexual intercourse should be reserved for marriage will expect that their child will adopt that same value. Families with a high degree of conformity orientation will stress homogeneity of attitudes and beliefs, focus on conflict avoidance, and dictate obedience to parents, while families low in conformity orientation will focus on individual independence from the family and equality of all family members (Koerner & Fitzpatrick, 2002).

Regarding sexual health communication, families with a high degree of conformity orientation will stress obedience to parent's attitudes on sexual dialogue, and avoid any conflict about sex communication by ostensibly acquiescing with the parent's ideas regarding sexual behavior. Parents with a low degree of conformity will deem it acceptable for their children to have ideas about sex that are different from their own, and each family member will have an equal opportunity to share and explain his or her beliefs about sex.

Evidence of a relationship between general communication and parent-child sexual communication.

Research suggests that high quality family communication can influence the sexual health communication that occurs between adolescents and their parents. However, the literature does not differentiate this communication by orientation (conversation or conformity).

Therefore, the evidence provided herein represents an association between general family communication that is deemed high quality and parent-adolescent sexual communication.

Higher quality general communication is characterized by more openness, fewer problems (O'Sullivan, Jaramillo, Moreau, & Meyer-Bahlburg, 1999), good listening skills, giving honest responses, and trying to understand another's viewpoint (Feldman & Rosenthal, 2000). In an examination of parents who discussed sexuality with their children, Fisher (1990) found that the single best predictor of high levels of sexual communication between college students and their parents was a high level of general family communication. A number of other studies have also found an association between quality of general communication and sexual discussions with their children (Coreil & Parcel, 1983; DiIorio et al., 2003; Raffaelli, Bogenschneider, & Flood, 1998). Moreover, research has consistently found an association between effectual general communication and improved sexual outcomes among adolescents, including delayed onset of sexual intercourse, fewer numbers of partners, and more consistent use of contraception (Brooks-Gunn & Furstenberg, 1989), providing further evidence in support of improving the overall quality of communication between parents and their children.

Knowledge of sexual health.

Knowledge regarding sexuality and the communication skills to effectively facilitate sharing this knowledge are important tools for parents in increasing the usefulness of the advice

they give their children. With respect to sexual health education curriculum, sexual knowledge generally pertains to human sexual development, contraceptive methods, male and female reproductive anatomy, and STIs, including HIV/AIDS.

Evidence of a relationship between knowledge and parent-child sexual communication.

Knowledge, or perception of knowledge regarding sexuality, purportedly influences the sexual communication exchanges between parents and their children (Byers et al., 2008; Fisher, 1990; Guilamo-Ramos, Dittus, et al., 2006; Raffaelli et al., 1998). Jaccard, Dittus, and Gordon (2000) identified knowledge as an important reservation held by mothers who may refrain from sexual communication with their adolescent out of fear they would be asked something they didn't know. The likelihood of sexual communication increases upon receiving additional information about sexual issues (King, Parisi, & O'Dwyer, 1993) as parents presumably feel more confident in their abilities to engage in sexual-specific discussions (Guilamo-Ramos, Dittus, et al., 2006).

Intention to discuss reproductive and sexual health.

A conceptual framework drawing on five major theories of human behavior was developed in 1991 for the purpose of examining health-related problem behaviors (Guilamo-Ramos, Jaccard, Dittus, Gonzalez, et al., 2008). At the core of the framework is the notion that intention is the key determinant of behavior, followed by environmental and personal factors that

influence and moderate the impact of intentions. According to this framework, the convergence of intention and supporting factors is most likely to generate behavioral change. While an individual's intention to perform a behavior is not always realized, meta-analyses indicate that changing behavioral intentions generates significant changes in behavior (Webb & Sheeran, 2006).

Evidence of a relationship between intention and parent-child sexual communication.

A few studies have captured important baseline information on parents' age-identified intentions to educate their young children on different aspects of human sexuality (El-Shaieb & Wurtele, 2009; Koblinsky & Atkinson, 1982), one of which sampled Latino parents of young children (Kenny & Wurtele, 2013). Kenny and Wurtele (2013) found that in comparison to a sample of White parents, Latino parents intended to communicate with their children about sexual abuse and molestation at an earlier age. However, they intended to have discussions about human reproduction, intercourse, and AIDS at a later age than the sample of White parents. This information is important as research tells us that girls are entering puberty earlier compared to decades ago (Dorn & Biro, 2011), and postponing discussions about reproduction and sexual activity renders children greatly unprepared (Kenny & Wurtele, 2013).

***Frequency of sexual communication*.**

The frequency of communication between parents and children can also play an important role in reducing sexual risk. For Latino youth, studies have shown that the more often parents talk about sexuality-related topics, the more likely it is that adolescents will share similar views with their parents on those topics, suggesting that adolescents do listen to their parents and that greater frequency of communication impacts their sexual decision making (Guilamo-Ramos, Jaccard, et al., 2007).

c. Mediating variable.

Acculturation is a construct which theorizes that culture is transferred from one generation to the next, and that individuals adopt different behaviors, values and attitudes as a consequence of their interactions with individuals from dissimilar cultures (Cuellar, Arnold, & Gonzalez, 1995). Traditionally, cultural change was seen as a process of relinquishing one's own culture in a linear manner and completely internalizing another culture. More recent research suggests that acculturation may not only be a linear process necessarily, but rather it may occur along many dimensions, including behavioral and cognitive domains. Considerable research has documented the behavioral changes associated with acculturation that include variance in verbal behavior, language, customs, cuisine, and cultural expressions (Cuellar, Arnold, & Maldonado, 1995). Cognitive cultural constructs are composed primarily of cultural beliefs, ideas, and

attitudes that influence how individuals think and behave. The cognitive level also includes beliefs about male and female roles, ideas about the nature of illness, and fundamental values (Cuellar, Arnold, & Gonzalez, 1995). The contribution of this cultural information forms an integrated system of beliefs that influence the manner in which one interprets life experiences. Moreover, it provides culturally-prescribed strategies for addressing a multitude of problems (Castro & Alarcon, 2002).

Numerous investigations have found that increased contact with American culture appears to erode the strength of one's cultural beliefs and values (Gonzalez-Lopez, 2004; Hill et al., 2003; Vazquez Garcia et al., 2000). For example, Gonzalez-Lopez (2004) examined Mexican immigrant fathers' views of virginity and revealed that more accultured men challenged some of the traditional values that they had earlier adopted. Gonzalez-Lopez thus challenges the stereotypical archetype of the Latino macho father. Levy (1988) found that as families assimilated into American culture, conflict was generated among Mexican-American families regarding sexuality and male and female roles.

Research has also shown that acculturative status can also influence the communicative behaviors between ethnic minority parents and their children. Several studies have demonstrated that elements of parenting, including communication style, are influenced by one's cultural background (Hill et al., 2003; Lefkowitz et al., 2000). This notion is supported by Driscoll and

colleagues who assert that the manner in which communication is handled within the family and the topics that are addressed constitute family processes that are significantly shaped by cultural values. Furthermore, findings suggest that as exposure to American culture increases among Latina mothers, their communication style becomes more congruent with that of European American mothers, reflected by an interactive as opposed to a didactic approach (Lefkowitz et al., 2000). Delgado-Gaiten (1994) similarly found that Latina mothers who were more accultured gave their children greater opportunities to express their viewpoints.

Baron and Kenny (1986) assert that a given variable is said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion. As previously stated, studies have demonstrated associations between acculturative status and the primary predictor and outcome variables included in this study. Therefore, behavioral acculturation was added to the model to test its function as a mediating variable, and to further clarify the pathway to the sexual communication outcome variables.

II.V. Role of Gender

Latino gender roles provide a frame of reference for contextualizing the difference in communication exchanges between parents and their sons and daughters. The gender biases that have been documented in Latino parenting practices influence both the content and process of communication between parents and their children, particularly regarding conversations about

sexuality (Benavides et al., 2006; Gonzalez-Lopez, 2004; Guilamo-Ramos, Dittus, et al., 2006). There is some experimental evidence demonstrating that mothers and fathers differ on elements that purportedly predict sexual communication; there is also evidence of variation according to the child's gender. Koblinsky and Atkinson (1979) measured parents' actual or anticipated comfort and intention associated with child sexual health communication. Their results revealed significant differences when combinations of parent and child gender were taken into account (e.g., mothers reported significantly greater levels of comfort with the prospect of discussing sexuality with their daughters in comparison to fathers of daughters).

Parent's gender.

Research on parent-child communication has repeatedly demonstrated that mothers are more likely to communicate with their children about avoiding risky behaviors than fathers (Coreil & Parcel, 1983; DiIorio, Kelley, & Hockemberry-Eaton, 1999; Downie & Coates, 1999; Jaccard et al., 2000). This finding is echoed in studies focusing on parent-child sexual communication in urban Latino families (Guilamo-Ramos, Dittus, et al., 2006; Meschke, Bartholomae, & Zentall, 2002; O'Sullivan et al., 2001; Rosenthal, Senserrick, & Feldman, 2001).

Child's gender.

Numerous investigations reveal that Mexican-origin parents treat boys differently than girls to socialize them according to specific cultural gender roles (Guilamo-Ramos, Dittus, et al.,

2006; Raffaelli & Ontai, 2004; Varela et al., 2004). Daughters, for example, are believed to experience a more authoritative parenting style whereas it is suggested that parents may employ a more permissive style with their sons (Hovell et al., 1994). This is in part attributed to the beliefs Latino parents reportedly hold regarding their children's safety. For instance, evidence suggests that parents' concern about negative peer influences is greater for their adolescent daughters than for their sons (Azmitia, 2002). Further, it is suggested that safeguarding their daughters from various sexual dangers including pregnancy, sexual violence, STDs, and abusive relationships, is a priority to Mexican-origin fathers, particularly after migrating to the U.S. (Gonzalez-Lopez, 2004). In sum, evidence shows that Latino parents are more likely to engage in sexual discussions with their adolescent daughters than adolescent sons (Coreil & Parcel, 1983; Raffaelli et al., 1998; Raffaelli & Green, 2003). In general, messages conveyed to girls are restrictive in tone, and stress the negative consequences associated with sexual activity, while information given to boys often involves physical development and sexual exploration (Downie & Coates, 1999).

The sexual communication predictor variables selected for this research are purportedly influenced by gender, although empirical studies that report differences according to parent and/or child gender are uncommon. Given that mothers are more likely to engage in sexual dialogue with their children than fathers, and that daughters are more likely to be the recipients

of sexual conversations with a parent, child and parent gender was taken into consideration in the present analysis.

II.VI. Profile: Latino Adolescent Population – Colorado and Boulder County

Population.

The fastest growing minority group in Colorado, Latino's currently comprise 21% of the state's overall population and 13.5% of the population in Boulder County (U.S. Census Bureau, 2012). The Latino population in Colorado grew by 41 percent between 2000 and 2010, where the total population increased by only 16.9% (Colorado Division of Local Government, 2011).

Colorado's Latino youth population grew by 44% in the last decade. Between 2000 and 2011, the number of Latino children in Boulder County increased from 16.1% of the total population under age 18 to 23.6% (a 36% increase). During the same time period, the population of white non-Latino children decreased from 76.8% to 67.2% (a 19% decrease) (Boulder County Movement for Children, 2012). Local census data indicate that 17% of Boulder County residents speak another language at home, of which 62% converse in Spanish.

Economic well-being.

The decrease in the child poverty rate was not equally distributed among all children in the county since 2000. More than 4 in 10 (41.9%) of Boulder's Latino children under the age of

18 were below the poverty line in 2011, compared to 3.4% of white non-Latino children, more than a 12-fold difference (Boulder County Movement for Children, 2012).

Education.

Latino students in the county had four-year graduation rates that were substantially lower than the rates for white non-Latino students between 2011-2012. Moreover, the Latino dropout rate was 7.5 times higher than the White non-Latino rate in the Boulder Valley School District (1.5% vs. 0.2%) (Boulder County Public Health, 2011).

Sexual risk.

Among high school youth, 47.5% of Latino students in Boulder County had ever had intercourse versus 30.0% of White students (Boulder County Public Health, 2011). Furthermore, the percentage of Latino youth who had sexual intercourse before the age of 13 was slightly lower than national rate (7.1%) but still showed a large disparity: 6.4% of Latino youth compared to 1.5% of non-Latino White youth (Boulder County Public Health, 2011). Also, condom use among Latino adolescents in Boulder County was found to be lower than the national average of Latino teens. Among sexually active Latino adolescents in the county, only 49.4% used a condom during last intercourse (Boulder County Public Health, 2011), compared to 58.4% of Latino adolescents nationally (CDC, 2012b).

Adolescent pregnancy and prenatal care.

The recent teen birth rate in Colorado was 28.9 per 1,000, of which 53% were to Latina adolescents (Office of Adolescent Health, 2011). Both the State and the County of Boulder continued their downward trends in both numbers and rates of teen births in 2011, mirroring national trends. Also comparable to national findings, Latino adolescents in Boulder County are disproportionately affected by unintended pregnancies. Recent data indicate that two-thirds of the county's births to 15 to 17 year olds were to Latino adolescents while 30% were to white non-Latino females (Boulder County Movement for Children, 2012).

Recent survey findings also revealed that teen women were far less likely to receive early prenatal care than were older women. In 2011, 28.6% of pregnant women younger than 18 received late or no prenatal care in Boulder County, nearly twice the rate for women of all ages. Receiving prenatal care was also influenced by ethnicity. The percent receiving late or no prenatal care was almost twice as high for Latino women in Boulder County in 2011 (20%) as for white non-Latino women (12%) (Boulder County Movement for Children, 2012).

Given the county's growing Latino youth population, coupled with increased risk and decreased support within the school system, strategies tailored to meet the specific sexual health education needs of Latino adolescents in Boulder County are warranted.

Chapter III: Research Methods and Procedures

III.I Overview of Study

The present study explored empirically the influence of cognitive and behavioral referents of acculturation on 1) predictors of communication about body safety and healthy sexuality, and 2) frequency of communication about body safety and sexuality (cumulatively, sexual communication findings) among parents of Mexican descent.

III.II Research Design

This study employed a cross-sectional survey research design that included 11 self-report questionnaires. The scales were distributed to research participants once informed consent was obtained, collectively measuring demographic information, endorsement to cultural constructs, level of behavioral acculturation, and parent-child sexual communication attitudes and behaviors. The surveys were available in both Spanish and English language to accommodate the participants' preference.

III.III Procedures

a. Selection of participants

Approval to conduct this study was obtained from the Columbia University Institutional Review Board (IRB). The approval letter is presented in Appendix A. A power analysis using the software program G*Power was conducted to detect the appropriate sample size to attain a

power of .80 given a two-tailed test and a typical alpha probability of .05 (Faul, Erdfelder, Lang, & Buchner, 2007). Following the conventions of Cohen (Cohen, 1988), a medium effect size (r^2 = .09) was selected. This magnitude of effect was appropriate given the expected strength of association, but sufficiently conservative as to avoid undue optimism. Given these parameters, the required sample size to detect a significant a significant change in R^2 was 89.

Recruitment. Participants were recruited for this study upon obtaining IRB approval, beginning in February, 2012. The majority of this study's sample (77%, n = 75) was recruited via word of mouth. Rodriquez and colleagues (2010) found word of mouth and use of existing community resources to be the most effective recruitment tool in their research with first generation Latinos (Domenech-Rodriguez, Rodriguez, & Davis, 2006). Of the population recruited by word of mouth, 23 subjects (or 24% of the total sample) were identified by a research assistant who was employed as a family outreach coordinator for the City of Boulder's Housing and Human Services Division.

The remaining 23% of the survey sample (n = 22) were recruited from a public middle school in Boulder, CO (Casey). Once permission from Casey's principal and the Boulder Valley IRB was obtained, the research team planned an event with the support of a BVSD Latino Parent liaison. The liaison is responsible for running monthly meetings with a school-based Latino parent group, and was able to identify a list of mothers and fathers who met this study's

eligibility criteria. In a newsletter to the parent group, the liaison introduced the subject of the present research, and notified them of a dinner event that included filling out a questionnaire.

Screening process. Inclusion criteria for this study included the following:

(1) The participant must be of Mexican descent;

(2) The participant must have a child between 5 and 14 years old;

(3) The participant must live in Boulder County, Colorado.

A total of 110 men and women who met the study's inclusion criteria were invited to participate. Ninety-three percent (n = 102) of this total selected to participate. To avoid over-representation of any one child, the study only included one parent from each two-parent household. The final number of surveys selected for inclusion in the present study was 97.

b. Data collection process.

Two locally based bi-lingual research assistants who were approved by the Columbia University IRB distributed surveys. They distributed scales to parents who meet the inclusion criteria and were interested in participating. Informed consent was obtained before any data was collected and was read to participants if they desired. (The Informed Consent Form is presented in Appendix B). Upon its receipt, participants completed the self-report measures, generally in their homes. The majority of the subjects (95%, n = 92) chose to complete the surveys in Spanish. Participants were instructed to answer the questionnaires as honestly as possible, and to

take as much time as needed. It took approximately 45 minutes to complete all of the questionnaires. Subjects were compensated with a $15 Target gift card for their participation.

III.IV. Instruments and Measures

Presented below in Table 1 is a list of the principal variables selected for inclusion in this study, followed by a description of the scales that were used to measure them. Scales were selected, when possible, on the basis of their previous use with samples similar to this study's population (e.g., Latino families with school-aged children) to maximize reliability, validity, age suitability, and cultural relevance. Two bi-lingual educators who had met the translation requirements of the Boulder Valley School District translated the scales that were not available in Spanish by the original author.

Table 1

Principal study variables

Predictor Variables	**Outcome Variables: Sexual Communication Findings**
Cultural Constructs	Predictors of Sexual Communication
1. Respeto	1. Comfort with sexual communication
2. Fatalism	2. Self-efficacy
3. Gender role attitudes: Machismo	3. Outcome expectancy
4. Gender role attitudes: Marianismo	4. General family communication: Conversation
	5. General family communication: Conformity
	6. Knowledge of sexual health
	7. Intention to discuss sexual health
	Frequency of Sexual Communication
	8. Sexual communication frequency
Mediating Variable: Behavioral Acculturation	

a. Demographic variables.

Pertinent socioeconomic and demographic information was included in the self-report questionnaire. The inventory assessed respondent's age and gender, children's age(s) and gender(s), place of birth, generational status, number of years living in the U.S., religious affiliation, level of education, marital status, and total family income. Participants were asked to report on a "Target child" identified as their eldest child within the study's parameters. See Appendix C for this study's Demographic Measure.

b. Independent variables: cultural constructs

b.1. Respeto.

The *Respeto* Scale, designed specifically for a study that explored the role of cultural values on the parenting practices of Mexican-origin families with young children, measured *Respeto* endorsement. It is an adaptation of existing *respeto* measures and was developed from theoretical constructs in the literature (Donovick, 2010). The *Respeto* Scale measures the value of proper behavior, and maintaining harmonious relationships through respect for self and others. A sample item from this subscale is: "Children must obey their parents without questioning them." The instrument is a 10-item Likert scale anchored by "strongly disagree" and "agree a little." Each of the six response categories was assigned a numeric identifier that ranged from 1 = "strongly disagree" to 6 = "strongly agree." Original categories (4) and (6) were recoded so

that higher scores represent greater endorsement of *respeto*. The *respeto* subscale score is the mean of the 10 individual items and total possible scores range from 1 to 6. The original *Respeto* Scale was written in Spanish by the authors and subsequently translated into English. To establish validity and equivalence, the scale was then back translated into Spanish. Two bilingual and bicultural research associates reviewed the results. When administered to the aforementioned population, the *Respeto* Scale demonstrated good internal reliability (alpha = .84) (Donovick). This measure is presented in Appendix D_1.

b.2. Fatalism.

The *fatalism* subscale, extracted from the Multiphasic Assessment of Cultural Constructs – Short Form (MACC-SF), was employed to assess the adherence to fatalistic beliefs among this study's population (Arnold & Cuellar, unpublished manuscript 1985, as cited in Cuellar, Arnold, & Gonzalez, 1995). The MACC-SF measures endorsement of five theoretical cultural constructs that embody important aspects of Mexican American culture, beliefs and values. A sample item from the *fatalism* subscale is: "It doesn't do any good to try and change the future because the future is in the hands of God." This subscale consists of eight true/false items. The number of true responses, indicating belief in the cultural script, is totaled to arrive at the Fatalism subscale score (one item is reverse-scored). Total possible scores range from 0 to 8 with higher scores reflecting a strong belief in the fatalistic statements presented. The scale demonstrated internal

consistency scores ranging between .59 - .63 when applied in a study examining cultural constructs among Mexican American adults. The *fatalism* measure is presented in Appendix D_2.

b.3. Machismo.

Machismo was measured among male respondents using the *machismo* subscale (Cuellar, Arnold, & Gonzalez, 1995), which is also an extract of the Multiphasic Assessment of Cultural Constructs – Short Form (MACC-SF). Male participants are asked to respond to 17 true/false items. A sample item from this subscale is: "A wife should never contradict her husband in public." The *machismo* subscale score was obtained by summing the individual true items. Total possible scores range from 0 to 17 with higher scores corresponding to a stronger endorsement of *machismo*. In a 1995 study examining cognitive referents of acculturation among Mexican American males, this scale demonstrated good internal reliability (alpha .78 - .84). The *machismo* measure is presented in Appendix D_3.

b.4. Marianismo.

The Latina Values Scale-Revised (LVS-R) was used to measure among female respondents the construct *marianismo.* It is a 27-item self-report measure that was revised and translated into Spanish from the original version of the LVS using the double translation procedure. A sample item from this subscale is: "I feel proud when others praise me for the sacrifices I have made." The LVS-R includes a conflict subscale after each of the 27 items that

measures the respondents' conflict as it relates to their responses (i.e.: "Has the response to this question caused you problems or conflicts in your life?"). The conflict subscale was omitted from the present study. Five category response options range from 1 = "strongly disagree" to 5 = "strongly agree." The *marianismo* subscale score is the mean of the 27 items (one item is reverse-scored), and total possible scores range from 1 to 5. Higher scores reflect a stronger endorsement of *marianismo*. In a study exploring the external validity and reliability of the LVS-R on a non-clinical Latina sample, the instrument proved to be highly internally consistent (α = .94) (Rivera Marano, 2000). The *marianismo* measure is presented in Appendix D_4.

c. Outcome variables: sexual communication predictors and frequency

c.1. Comfort discussing sexual health and safety.

Research on sexual communication recognizes that parents are considerably less comfortable discussing issues of a personal nature as opposed to biological topics (Koblinsky & Atkinson, 1982; Rosenthal & Feldman, 1999; Sabatiuk & Flores, 2009). This research measured parents' level of *anticipated* or *actual comfort* on a variety of sexual health topics, ranging from developmental and safety issues to those that are considered more private, and employed a modified version of a scale developed by Koblinsky & Atkinson. Data for the current study was obtained from a section of the questionnaire that addresses parents' level of comfort in discussing 15 sexual issues, categorically ranging from 1 = "totally comfortable" to 6 = "totally

uncomfortable." Response categories were reverse-coded so that higher scores are indicative of greater comfort discussing sexual health and safety. The comfort subscale score is the mean of the 15 items and total possible scores range from 1 to 6. The comfort discussing sexual health measure is presented in Appendix E_1.

c.2. Self-efficacy.

The present study employed the Communication About Sex Self-Efficacy Scale, developed by Diiorio and colleagues (2001) to measure parents' confidence in their abilities to discuss sexual health topics with their adolescent. For the purpose of this study, self-efficacy was defined as the parent's overall belief in his or her capability to talk with his/her adolescent about specific sex related topics. Three aspects of sex-based discussions were identified: 1) physiological processes (e.g., menstruation), 2) practical issues (e.g., where to get condoms), and 3) safer sex messages (e.g., he/she should use condoms if he/she decides to have sex). Indicators of the three aspects were obtained from a review of the literature on self-efficacy, social cognitive theory, parent-adolescent sex-based discussions, and information on puberty. This review was augmented with transcripts from focus group discussions with mothers about sex based discussions held with their children (DiIorio et al., 2001).

This scale consists of 16 items that begin with the question "How sure are you that you can always explain to your adolescent.." A sample item is: "How sure are you that you can

always explain to your adolescent why an unmarried person should use a condom when they have sex." Seven category response options range from 1 = "not sure at all" to 7 = "completely sure." The self-efficacy subscale score was obtained by summing responses to individual items (each item is positively worded). Total possible scores range from 16 to 112 with higher scores reflecting a greater degree of self-efficacy to discuss sexual health issues with adolescents. The Communication About Sex Self-Efficacy Measure is presented in Appendix E_2.

c.3. Outcome expectancy.

The Communication About Sex Outcome Expectancy Scale was included in the present study, also developed by Diiorio and colleagues (2001). This scale measures parents' expectations about the outcomes associated with parent/child sexual health dialogue. It is a 15-item Likert scale anchored by 1 = "strongly disagree" and 5 = "strongly agree." Each item begins with "If you talk with your adolescent about sex topics…" A sample item from this subscale is: "If you talk with your adolescent about sex topics, your adolescent will be less likely to get pregnant/get a girl pregnant." Of the 15 items, 5 are negatively worded and were reverse coded prior to scoring. The outcome expectancy subscale score was obtained by summing responses to individual items. Total possible scores range from 15 to 75 with higher scores reflecting more positive outcomes associated with talking to one's child about sexual health. The communication about sex outcome expectancy measure is presented in Appendix E_3

The psychometric properties of this instrument were explored in a 2001 study (Diiorio). The sample consisted of predominantly African American mothers and their adolescents participating in an HIV prevention initiative. Alpha coefficients for the self-efficacy and the outcome expectancy scales were .85 and .83, respectively, meeting the accepted standard of internal consistency reliability.

c.4 General communication: conversation and conformity.

Quality of general communication was measured using the Revised Family Communication Patterns (RFCP) scale (Ritchie & Fitzpatrick, 1990), which is presented in Appendix E_4. The RFCP is comprised of 26 statements that measure how an individual feels about the communication that occurs within the family. Each of the items is rated on a 5-point Likert scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree" (Koesten, 2004). The instrument is used to measure two distinct communication orientations (Conversation and Conformity), which are incorporated into the following two subscales:

Conversation. The RFCP Conversation subscale measures the degree of openness, individuality, and free expression of ideas that occurs within one's family. This 15-item scale encapsulates parental encouragement of conversation and the open exchange of feelings and expression of ideas. Of the 15 items, 5 are negatively worded and were reverse coded prior to scoring. The Conversation subscale score was obtained by calculating the mean of the 15 items,

with possible scores ranging from 1 to 5. Higher scores are indicative of greater encouragement to be expressive in family communication.

Conformity. The RFCP Conformity subscale measures the extent of conformity to parental authority that occurs within the family. This 11-item scale implies the use of parental authority to enforce the child's conformity to the parent. Of the 11 items, 6 are negatively worded and were reverse coded before obtaining a subscale score. The mean of the 11 items was calculated to generate the conformity subscale score, with possible scores ranging from 1 to 5. High scores in this orientation are generally associated with less communication.

The RFCP instrument can be administered either to a parent or to their child (Browne, 2010). Both versions have been shown to have good reliability (Fitzpatrick & Ritchie, 1994), producing acceptable Cronbach's alpha coefficients for conversation ($\alpha = .84$) and conformity orientations ($\alpha = .76$) (Ritchie & Fitzpatrick, 1990).

c.5. Knowledge of sexual health.

The Miller-Fisk Sexual Knowledge Questionnaire, originally developed in 1969 as a 49-item survey and later modified by Gough (1974), was used to measure parents' understanding of a variety of sexual topics, including reproductive physiology, pregnancy, contraception, and fertility. The Miller-Fisk measure has been employed for over two decades to examine sexuality and sexual health training. The revised scale consists of 24 items, equally divided between four-

option multiple choice and true/false items (Gough, 1974). The knowledge of sexual health sub score was calculated by summing the number of correct responses. Total possible scores range from 0 to 24 with a higher score suggesting greater knowledge of sexual health. When was tested on college men and women, statistics indicated that coefficients were statistically significant and reliabilities ranged from .62 to .70, suggesting an acceptable degree of internal consistency for this measure (Gough, 1974). The Miller-Fisk Sexual Knowledge Questionnaire is presented in Appendix E_5.

c.6. Intention to discuss reproductive and sexual health.

This outcome variable was measured using the Koblinsky & Atkinson scale (1982) described earlier. Data for the present study was obtained from a section of the questionnaire that addresses parents' intentions to discuss the same 15 sexual health topics that were included in the comfort discussing sexual health and safety scale. For each of the 15 items, respondents were asked the questions: "Have you already discussed this topic?" and "If you have *not* discussed this topic yet, do you plan on discussing it?" The intention subscale score was calculated by summing the positive responses to the latter question (coding was dichotomous: yes/no). Total possible scores range from 0 to 15 with higher scores indicating greater intention of discussing sexual health issues with a Target child if that had not yet occurred. In addition, parents were asked to indicate their child's age at which they intended to introduce each of the

15 sexual health topics. The intention to discuss reproductive and sexual health measure is presented in Appendix E_6.

c.7. Sexual communication frequency.

Sexual communication frequency was measured using a scale designed by Byers, Sears, and Weaver (2008). This instrument is comprised of 10 sexual health topics, including both biological and non-biological variables, which are rated on a 4-point Likert scale. Respondents were asked to indicate the extent to which they had discussed each topic with their Target child, ranging from 1= "not at all" to 4 = "in a lot of detail." The sexual communication frequency subscale score was obtained by summing responses to individual items. Total possible scores range from 10 to 40 with higher scores indicating greater sexual communication frequency. In the authors' study on parents' reports of sexual communication with children in grades K-8, scores on the 10 items were summed to yield a total extent of sexual communication score (α = .91). The parent/child sexual communication frequency measure is presented in Appendix E_7.

d. Mediating Variable: Behavioral acculturation.

Level of acculturation was assessed using Cuellar, Arnold, and Maldonado's (1995) Acculturation Rating Scale for Mexican Americans-II (ARSMA-II), presented in Appendix F. The ARSMA-II is an orthogonal and multidimensional Likert scale that measures the frequency with which an individual engages in activities related to Anglo and Mexican culture. It is

comprised of 30 self-report items that assess four factors: (1) language use and preference; (2) ethnic identity and classification; (3) cultural heritage and ethnic behaviors; and (4) ethnic interaction.

The four factors are organized into two subscales that measure cultural orientation. The Mexican Orientation Scale (MOS) consists of 17 items, and the Anglo Orientation Scale (AOS) is comprised of 13 items. Sample items from the MOS and AOS subscales are, respectively: "I enjoy Spanish language TV," and "My friends now are of Anglo origin." Respondents are asked to rate how frequently they engage in these activities on a 5-point scale ranging from 1 = "not at all" to 5 = "extremely often or almost always." MOS and AOS subscale scores were obtained by calculating their individual means. Total possible scores range from 1 to 5 with higher scores reflecting stronger cultural orientation.

The two subscales (AOS and MOS) were found to have good internal reliabilities and high Pearson correlation coefficients with the original scale (.86 and .88, respectively). The ARSMA II has been validated using the new instrument's separate subscales for assessing acculturation processes by measuring cultural orientation toward the Mexican and Anglo culture independently, which reflects a multidimensional conceptualization of acculturation. Therefore, one of the advantages of this instrument is that it provides a bilinear assessment of acculturation.

The ARMSA II is also able to generate an overall behavioral acculturation (BA) subscale score that is calculated by subtracting the MOS mean from the AOS mean. Total possible scores range from -4 to 4 and reflect one's position along a continuum from very Mexican oriented to very Anglo oriented. For the purposes of this study, the two subscales of the ARSMA II were used in addition to the overall BA score, thus generating three separate scores.

III.V. Data Analysis Plan

Prior to analysis, the dataset was inspected for missing data and outliers. The analysis plan for this dissertation consisted of five steps. First, descriptive statistics (frequencies and percentages) were obtained for all demographic variables, presented by parent gender. Second, estimates of reliability (Cronbach's α) were computed for each subscale of each measure used. Third, descriptive statistics (means, standard deviations and range) for all study variables were computed by parent gender. Fourth, to examine the bivariate association among the study variables, Pearson linear correlation coefficients were computed between the cultural predictor variables, behavioral acculturation, and the sexual communication outcome variables. Correlation analyses were executed and presented by parent gender. Fifth, a series of linear multiple regression analyses were executed to answer the study's three research questions and test each of the corresponding hypotheses. The statistical software package used for all statistical analyses in the present study was SPSS version 20.

Chapter IV: Results

This chapter is organized into the following six sections:

1. Description of Sample
2. Reliability Estimates for the Subscales
3. Descriptive Statistics for all Study Variables
4. Correlations Among the Variables
5. Results to Research Questions and Tests of the Hypotheses
6. Analysis of Control Variables

IV.I. Description of Sample

A combined total of 97 parents of Mexican descent participated in the current study, 79.4% of whom were female (n = 77). The fathers, on average, were approximately four years older than the mothers in the sample (M = 39.75 vs. M = 35.77, respectively; t = -1.98, p<.05) and they ranged in age from 21 to 61 years. While nearly 90% of female survey respondents identified themselves as 1st generation American (88.3%, n = 68), this figure dropped to 60.0% (n =12) among the male respondents (t = 2.45, p<.05). Only 10% (10.4%, n = 8) of the mothers reported being 2nd generation in comparison to 40% (n = 8) of the fathers (t = -2.57, p<.05). On average, the women in the sample had spent 16.3 years in the U.S., and the men had spent 22.5 years (t = -2.98, p<.01). As reflected in Table 2, similarities among the male and female samples

emerged, particularly regarding religion and marital status, where no statistical differences by gender were found.

The study population identified a Target Child (their oldest child between 5 and 14 years-of-age), and reported on that child's age, gender, and the existence of older siblings. While differences in Target Child's mean age, and presence of older siblings were not found to be statistically significant between the mothers and fathers, differences regarding their child's gender were significant. The fathers sampled had an overwhelming majority of sons (70%, n = 14) in comparison to the mothers with sons (40.3%, n = 31) ($t = -2.54$, $p<.05$). In contrast, the mothers reported having a greater proportion of daughters (58.4%, n = 45) in comparison to the fathers with daughters (30%, n = 6) ($t = 2.43$, $p<.05$).

Table 2

*Description of the Sample by Parent Gender (N = 97)**

Variable	Mothers/Females		Fathers/Males		*t*-test[a]
	n	%	n	%	
Parent respondent	77	79.4	20	20.6	
Respondent's mean age	*M* = 35.77 (SD = 7.06)		*M* = 39.75 (SD = 10.33)		2.02*
Target child gender					
Female	45	58.4	6	30.0	2.43*
Male	31	40.3	14	70.0	-2.54*
Missing	1	1.3	0	0.0	n/a
Target child's mean age	*M* = 10.61 (SD = 2.67)		*M* = 10.50 (SD = 2.91)		0.16
Presence of older siblings	26	33.8	4	20.0	n/a
Total number of children	*M* = 2.88 (SD = 1.40)		*M* = 2.45 (SD = 1.05)		1.25
Generational Status					
1st	68	88.3	12	60.0	2.45*
2nd	8	10.4	8	40.0	-2.57*
3rd	1	1.3	0	0.0	n/a
Number of Years in the U.S.	*M* = 16.34 (SD = 6.71)		*M* = 22.53 (SD = 12.14)		2.97**
Highest level of education					
Less than 8th grade	34	44.2	5	25.0	1.71
Did not graduate from high school	19	24.7	3	15.0	n/a
High school graduate	13	16.9	6	30.0	-1.18
Trade school	3	3.9	1	5.0	n/a
Some college but did not graduate	5	6.5	3	15.0	n/a
College degree	2	2.6	1	5.0	n/a
Missing	1	1.3	1	5.0	n/a

Total family income					
<$10K	26	33.8	2	10.0	n/a
$10K - $20K	18	23.4	5	25.0	-0.14
$20K - $30K	16	20.8	7	35.0	-1.22
$30K - $40K	4	5.2	2	10.0	n/a
$40K - $50K	2	2.6	0	0.0	n/a
$50K+	1	1.3	3	15.0	n/a
Missing	10	13.0	1	5.0	n/a
Are you a member of a religious denomination?					
Yes	74	96.1	18	90.0	0.86
No	3	3.9	2	10.0	n/a
How important is religion to you?					
Not at all important	2	2.6	1	5.0	n/a
Somewhat important	9	11.7	2	10.0	n/a
Quite important	24	31.2	8	40.0	-0.72
Very important	41	53.2	9	45.0	0.65
Missing	1	1.3	0	0.0	n/a
Marital status					
Married	43	55.8	11	55.0	0.06
Not married but living w partner	14	18.2	3	15.0	n/a
Separated or divorced (not living with partner)	13	16.9	5	25.0	-0.76
Single, not living with a partner	4	5.2	1	5.0	n/a
Missing	3	3.9	0	0.0	n/a

*Sample n's vary given missing data.

[a] *t*-tests are tests for independent proportions (for percentages) or independent samples (for means). Tests were conducted for all comparisons that had at least an n of 5 in each group. *p<.05 **p<.01.

IV.II. Reliability Estimates for the Subscales

Cronbach's α calculates the average inter-item correlation for each measure to provide an estimate of a measure's reliability (Cronbach, 1951). Table 3 shows the reliability estimates for

the measures used in the study. All of the scales had adequate alpha scores with the exception of the Knowledge scale (α = .48). Potential explanations are described in Chapter VI.

Table 3

Internal Consistency Reliability Coefficients for Subscales

Subscale	No. of Items	Reliability (Cronbach's α)
Predictor Variables		
Respeto	10	.83
Fatalism	8	.68
Machismo	17	.92
Marianismo	28	.88
Outcome Variables		
Comfort	15	.94
Efficacy	16	.96
Expectancy	15	.86
General Communication: Conversation	15	.67
General Communication: Conformity	15	.69
Knowledge	24	.48
Intention	15	.94
Frequency	10	.95
Mediating Variables		
AOS	13	.79
MOS	17	.92
Behavioral Acculturation	30	.79

IV.III. Descriptive Statistics for all Study Variables by Parent Gender

Means, standard deviations, range, and *t*-test values are presented in Table 4 for each of the study variables. As the table indicates, there was no significant difference between the men and the women in the sample on either of the predictor variables, *respeto* or *fatalism* (t-tests were not run on *machismo* and *marianismo* as they were measured exclusively by males or females). Among the total sample, mean scores were higher than their respective scale midpoint values for three of the four predictor variables. These variables included *respeto* [*M* = 4.14 (1.00) vs. scale

midpoint = 3.5], *fatalism* [*M* = 4.45 (1.95) vs. scale midpoint = 4.0], and *marianismo* [*M* = 3.21 (.62) vs. scale midpoint = 3.0]. In contrast, the *machismo* mean score was lower than it's midpoint value [*M* = 7.40 (5.55) vs. scale midpoint = 8.5].

Of the eight outcome variables, only one (knowledge) was found to have a difference between the men and women that was statistically significant (t = 2.59, $p<.05$). The mothers in the sample, on average, are more knowledgeable about reproductive physiology, pregnancy, contraception, and fertility in comparison to the fathers [*M* = 10.86 (3.11) vs. *M* = 8.68 (3.83), respectively]. The total sample's knowledge score, however, fell below the midpoint value [*M* = 10.41 (3.36) vs. scale midpoint = 12.0]. Falling below the mean also occurred with the outcome variables intention [*M* = 2.95 (4.37) vs. scale midpoint = 7.7] and frequency [*M* = 24.18 (9.76) vs. scale midpoint = 25.0] among the total sample. In contrast, the mean scores for the remaining five outcome variables were all higher than their respective midpoint values. These included comfort [*M* = 3.76 (1.35) vs. scale midpoint = 3.5], efficacy [*M* = 75.07 (28.49) vs. scale midpoint = 64.0], expectancy [*M* = 57.04 (11.36) vs. scale midpoint = 45.0], conversation [*M* = 3.64 (.44) vs. scale midpoint = 3.0], and conformity (which is reverse-scored) [*M* = 2.84 (.54) vs. scale midpoint = 3.0].

The study's sample differed significantly on two of the three acculturation variables. On average, the fathers had a greater Anglo orientation than the mothers as reflected by their AOS

scores [*M* = 3.22 (.94) vs. *M* = 2.63 (.85), respectively; t = 2.72, *p*<.01]. In addition, the men and women in the sample differed significantly on their acculturation status [fathers *M* = -.96 (1.16) vs. mothers *M* = -1.76 (1.05)] (t = 2.98, *p*<.01), denoting that the females are more Mexican oriented than the males. The total sample's AOS and behavioral acculturation mean scores were both below their respective midpoint values [AOS: *M* = 2.75 (.90) vs. scale midpoint = 3.0; BA: *M* = -1.59 (1.12) vs. scale midpoint = 0], while the MOS mean score was above its midpoint value [*M* = 4.35 (.47) vs. scale midpoint = 3.0]. Collectively, these three scores indicate a greater Mexican- and a lesser Anglo orientation among the mothers and fathers in the sample.

Table 4

Means, Standard Deviation, Range, and t-Test Values for all Study Variables by Parent Gender

	Mothers (*n* = 77)*		Fathers (*n* = 20)*		**Total (*N* = 97)***		Sample	
Variable	*M*	*SD*	*M*	*SD*	***M***	***SD***	Range	*t*-test [a]
Predictor Variables								
Respeto	4.14	(1.03)	4.13	(.92)	**4.14**	**(1.00)**	1.70 – 6.00	.04
Fatalism	4.59	(1.87)	3.95	(2.21)	**4.45**	**(1.95)**	0.00 – 8.00	1.30
Machismo	n/a	(n/a)	7.40	(5.55)	**n/a**	**(n/a)**	0.00 – 17.00	n/a
Marianismo	3.21	(.62)	n/a	(n/a)	**n/a**	**(n/a)**	1.89 – 4.58	n/a
Outcome Variables								
Comfort	3.77	(1.36)	3.73	(1.33)	**3.76**	**(1.35)**	1.00 – 6.00	.11
Efficacy	76.21	(29.33)	71.00	(25.54)	**75.07**	**(28.49)**	14.00 – 112.00	.72
Expectancy	57.12	(11.49)	56.75	(11.17)	**57.04**	**(11.36)**	18.00 – 75.00	.13
Conversation	3.66	(.43)	3.55	(.49)	**3.64**	**(.44)**	2.60 – 4.60	1.03
Conformity	2.79	(.47)	3.01	(.74)	**2.84**	**(.54)**	1.36 – 4.27	1.63
Knowledge	10.86	(3.11)	8.68	(3.83)	**10.41**	**(3.36)**	2.00 – 20.00	2.59*
Intention	2.62	(4.08)	4.16	(5.23)	**2.95**	**(4.37)**	0.00 – 15.00	1.36
Frequency	24.68	(9.67)	22.40	(10.13)	**24.18**	**(9.76)**	9.00 – 40.00	.92
Mediating Variables								
AOS	2.63	(.85)	3.22	(.94)	**2.75**	**(.90)**	1.08 – 5.00	2.72**
MOS	4.39	(.42)	4.18	(.62)	**4.35**	**(.47)**	2.76 – 5.00	1.78
BA	-1.76	(1.05)	-.96	(1.16)	**-1.59**	**(1.12)**	-3.52 – 1.54	2.98**

*Sample n's vary given missing data

[a] *t*-tests are tests for independent proportions (for percentages) or independent samples (for means). Tests were conducted for all comparisons that had at least an n of 5 in each group. *p<.05 **p<.01.

IV.IV. Correlations Among the Variables

Pearson linear correlation coefficients were computed among all of the cultural predictor variables and the sexual communication outcome variables. Analyses were done separately by parent gender to allow for a better understanding of how cultural values and beliefs influence the sexual communication predictive behaviors of men and women differently. A correlation table representing the full sample is presented in Appendix G. Table 5 shows the number of significant and non-significant correlations for each of the 14 variables among the female sample. As reflected in the table, some variables emerged as having large numbers of significant correlations as compared to other variables. The cultural predictor variables *respeto* and *marianismo* each significantly correlated with five of the eight sexual communication outcome variables, with considerable overlap. The four outcome variables most frequently correlated with the female predictors included expectancy, conversation, conformity, and frequency.

The predictor variable *respeto* was significant and negatively correlated with comfort [r (70) = -.24, $p<.05$], conversation [r(76) = -.26, $p<.05$], intention [r(68) = -.26, $p<.05$], and frequency [r(71) = -.34, $p<.01$]. *Fatalism* was found to be significant and negatively correlated with efficacy [r(70) = -.25, $p<.05$], and expectancy [r(71) = -.28, $p<.05$]. Lastly, *marianismo* was significant and negatively correlated with expectancy [r(72) = -.27, $p<.05$], conversation [r(75) = -.34, $p<.01$], knowledge [r(71) = -.25, $p<.05$], and frequency [r(70) = -.28, $p<.05$].

Respeto, *fatalism*, and *marianismo* each positively correlated with the outcome variable conformity [(r(76) = .50, p<.01]; [r(74) = .25, p<.05]; [r(75) = .36, p<.01)], respectively. Greater endorsement of these cultural beliefs and values were thus associated with a greater belief in children conforming to parental authority.

In addition, the predictor variable *fatalism* was negatively correlated with behavioral acculturation [r(74) = -.26, p<.05]. Higher endorsement of *fatalism* among this study's female sample was associated with lower levels of acculturation (as measured by the ARSMA II).

Table 5

Correlations Among the Study Variables by Parent Gender, FEMALE

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Females														
1. Respeto	1	.23	.35**	-.24*	-.22	-.17	-.26*	.50**	-.13	-.26*	-.34**	-.16	.14	-.19
2. Fatalism	.	1	.37**	-.17	-.25*	-.28*	-.21	.25*	-.10	-.13	-.14	-.23	.19	-.26*
3. Marianismo			1	-.17	-.09	-.27*	-.34**	.36**	-.25*	-.12	-.28*	-.09	-.07	-.04
4. Comfort				1	.07	.27*	.20	.05	-.08	.02	.18	-.02	-.04	.00
5. Efficacy					1	.47**	.33**	-.13	-.25*	.28*	.26*	.31**	-.05	.27*
6. Expectancy						1	.31**	-.17	-.18	.24*	.40**	.11	.03	.07
7. Conversation							1	-.45**	.15	.15	.37**	.21	.18	.10
8. Conformity								1	-.34**	-.12	-.30**	-.20	-.09	-.12
9. Knowledge									1	.07	-.12	-.03	.07	-.05
10. Intention										1	-.21	.20	-.14	.22
11. Frequency											1	.22	.11	.13
12. AOS												1	-.28*	.92**
13. MOS													1	-.63**
14. BA														1

(*p<0.05; **p<0.01)

Table 6 shows the number of significant and non-significant correlations for each of the 14 variables among the male sample. Among the fathers, the predictor variable *machismo* was

significant and negatively correlated with five of the eight sexual communication outcome variables, including: comfort [r(19) = -.51, p<.05], expectancy [r(19) = -.55, p<0.05], conversation [r(19) = -.82, p<.01], and frequency [r(19) = -.47, p<.05]. Comparable to *marianismo* in the female sample, a positive correlation was found between *machismo* and conformity [r(19) = .76, p<.01]. The predictor variable *respeto* was significant and negatively correlated with one outcome variable, conversation [r(19) = -.53, p<0.05].

Similar to the females, the predictor variable *fatalism* was significant and negatively associated with acculturation. This association included two of the three acculturation variables: behavioral acculturation [r(19) = -.61, p<.01], and Anglo orientation [r(19) = -.60, p<.01].

Table 6

Correlations Among the Study Variables by Parent Gender, MALE

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Males														
1. Respeto	1	.13	.49*	-.03	.40	-.13	-.53*	.27	-.27	.23	.21	-.22	-.14	-.10
2. Fatalism		1	.11	-.25	-.21	-.02	-.23	.03	-.34	-.05	-.15	-.60**	.23	-.61**
3. Machismo			1	-.51*	.22	-.55*	-.82**	.76**	-.37	.44	-.47*	-.11	-.16	.00
4. Comfort				1	.45*	.47*	.33	-.57**	.19	-.06	.56**	.05	-.12	.11
5. Efficacy					1	.27	-.39	.08	-.07	.13	.31	.07	-.26	.20
6. Expectancy						1	.42	-.56*	-.07	-.24	.49*	-.10	-.21	.03
7. Conversation							1	-.73**	.49*	-.42	.26	.10	.02	.07
8. Conformity								1	-.18	.60**	-.71**	.08	-.27	.21
9. Knowledge									1	-.03	.01	.36	-.40	.51*
10. Intention										1	-.66**	-.18	-.26	.00
11. Frequency											1	.17	.15	.06
12. AOS												1	-.06	.85**
13. MOS													1	-.59**
14. BA														1

(*p<0.05; **p<0.01)

IV.V. Results to Research Questions and Tests of Hypotheses

A succession of linear multiple regression equations were conducted to answer this study's research questions and corresponding hypotheses. The results of each test of the hypotheses are described in turn below as they relate to the three research questions that guided this study.

RQ1. Will the sexual communication findings of Mexican-origin parents be negatively associated with the independent predictor variables: *respeto, fatalism,* and *gender role attitudes (machismo and marianismo)?*

To answer Research Question 1 we tested Hypothesis 1 – Hypothesis 4, measuring the influence of *respeto, fatalism, machismo,* and *marianismo*, respectively, on each of the sexual communication outcome variables. Hypotheses 1 (*respeto*) and 2 (*fatalism*) were tested among the total sample ($N = 97$), which included data from both male and female respondents. The predictor variables *machismo* and *marianismo* were excluded from these hypothetical models because they only have data for males and females, respectively. Hypothesis 3 (*machismo*) was tested among the male sample ($n = 20$) and Hypothesis 4 (*marianismo*) was tested among the female sample ($n = 77$). In some cases, model n's were smaller due to missing data.

A series of linear regressions were run on each of the study's eight outcome variables to determine whether Latino cultural values and beliefs influenced sexual communication attitudes

and behaviors, and to what degree. To capture relevant information on the role of parent's gender, separate regression equations were run for female and male respondents (in addition to the total sample) for each of the eight models.

The following demographic variables were controlled for in the final regression models: religiosity, education, income, target child's gender, target child's age, and the existence of older siblings. Respondent's gender was added as an additional control variable to the eight analyses that comprised the total sample (omitting the gender role variables, *machismo* and *marianismo*). The influence of the control variables in the model is discussed in Section IV.VI. Full regression models are presented in Appendix H_1 – H_8.

*H1) <u>After controlling for child and parent demographic variables, it is predicted that as level of endorsement to **respeto** decreases, parents' communication findings with their children about body safety and sexuality will increase</u>.*

The test of the proposed pathway between *respeto* and the sexual communication outcome variables was partially confirmed. Evidence of a significant relationship was found between *respeto* and two outcome variables: conformity and intention.

1. <u>Conformity</u>. Tests yielded significant outcomes among the total sample [$\beta = 0.19$, $t(78) = 2.89$, $p<.01$], as well as among the female sample [$\beta = 0.18$, $t(59) = 2.86$, $p<.01$]. Each increase in *respeto* score of 1 pt. was related to a .19 pt. increase in

conformity (.18 among female sample). In other words, higher levels of *respeto* were related to higher levels of conformity (greater belief in conforming to parental authority).

2. Intention. Among the female sample, *respeto* was found inversely related to intention [$\beta = -1.01$, $t(54) = -2.15$, $p<.05$], such that each 1 pt. increase in *respeto* score was related to a 1.01 pt. decrease in intention to discuss sexual health and safety.

Respeto was not significantly related to comfort, efficacy, expectancy, conversation, knowledge, or frequency.

*H2) After controlling for child and parent demographic variables, it is predicted that as level of endorsement to **fatalism** decreases, parents' communication findings with their children about body safety and sexuality will increase.*

The test of the proposed pathway between *fatalism* and the sexual communication outcome variables was partially confirmed. The results revealed a statistically significant relationship between *fatalism* and one outcome variable, expectancy.

1. Expectancy. Among the total sample, *fatalism* was a statistically significant predictor of expectancy [$\beta = -1.98$, $t(75) = -2.43$, $p<.05$], such that each increase in *fatalism* score of 1 pt. was related to a 1.98 pt. reduction in expectancy.

fatalism was also a statistically significant predictor of expectancy among the female sample [$\beta = -2.26$, $t(56) = -2.24$, $p<.05$], such that each increase in *fatalism* score of 1 pt. was related to a 2.26 pt. reduction in expectancy. In other words, higher levels of *fatalism* were related to fewer positive outcomes associated with talking to one's child about sexual health and safety.

Fatalism was not significantly related to comfort, efficacy, conversation, conformity, knowledge, intention, or frequency.

H3) After controlling for child and parent demographic variables, it is predicted that as level of endorsement to ***machismo*** *decreases, parents' communication findings with their children about body safety and sexuality will increase.*

The test of the proposed pathway between *machismo* and the sexual communication outcome variables was partially confirmed among male respondents. Specifically found evidence of a significant relationship between *machismo* and two outcome variables: conversation and conformity.

1. Conversation: Among male respondents, *machismo* was a statistically significant predictor of conversation [$\beta = -.07$, $t(16) = -3.66$, $p<.01$], such that each increase in *machismo* score of 1 pt. was related to a .07 pt. decrease in conversation.

2. Conformity: *Machismo* was a statistically significant predictor of conformity [β = .09, t(16) = 3.54, $p<.01$], such that each increase in *machismo* score of 1 pt. was related to a .09 pt. increase in conformity.

Machismo was not significantly related to comfort, efficacy, expectancy, knowledge, intention, or frequency.

*H4) After controlling for child and parent demographic variables, it is predicted that as level of endorsement to **marianismo** decreases, parents' communication findings with their children about body safety and sexuality will increase.*

The test of the proposed pathway between *marianismo* and the sexual communication outcome variables is partially confirmed among female respondents. Evidence of a relationship was found between *marianismo* and two outcome variables: conversation and frequency.

1. Conversation: *Marianismo* was a statistically significant predictor of conversation [β = -.20, t(59) = -2.23, $p<.05$], such that each increase in *marianismo* score of 1 pt. was related to a .20 pt. decrease in conversation.
2. Frequency: *Marianismo* was a statistically significant predictor of Frequency [β = -3.79, t(56) = -2.05, $p<.05$], such that each increase in *marianismo* score of 1 pt. was related to a 3.79 pt. decrease in frequency.

Marianismo was not significantly related to comfort, efficacy, expectancy, conformity, knowledge, or intention.

Summary of Research Question 1

Results obtained from the four hypotheses tests both answered Research Question 1 and informed us of Path c (from the study's conceptual model, see Figure 1), which predicted an inverse relationship between cultural construct endorsement and sexual communication attitudes and behavior. As expected, given the large number of predictor, outcome, and control variables in the model, we found partial evidence of an inverse relationship among the study's principal variables. Table 7 (below) depicts the significant associations that were revealed in the regression data, presented according to parents' gender (female sample, male sample, and full sample).

As the table suggests, *respeto, marianismo* and *machismo* each predicted two outcome variables while *fatalism* predicted one outcome variable. General communication emerged as the center of the model, denoting the most significantly influenced outcome variable for both men and women in the sample. Between the two subscales that comprise this variable (conversation and conformity), a positive association was made with three of the four predictor variables, including *respeto, machismo and marianismo*. In contrast, three models (comfort, efficacy and knowledge) had no significant associations. As mentioned previously, it is essential

to understand what factors influence sexual communication predictive behaviors and beliefs since they are malleable and can be modified with the support of an effective intervention strategy.

Table 7

Significant Relationships Between Primary Predictor and Outcome Variables

PREDICTOR VARIABLES: Cultural Construct	OUTCOME VARIABLES: Sexual Communication Findings							
		Self & Outcome Efficacy		General Communication				
	Model 1.1 Comfort	Model 1.2 Efficacy	Model 1.3 Expectancy	Model 1.4 Conversation	Model 1.5 Conformity	Model 1.6 Knowledge	Model 1.7 Intention	Model 1.8 Frequency
H1 Respeto								
H2 Fatalism								
H3 Machismo								
H4 Marianismo								

Key: Full sample (solid); Female sample (vertical); Male sample (diagonal).

RQ2. Does behavioral acculturation mediate the relationship between cultural construct endorsement and sexual communication findings among Mexican-origin parents?

To answer Research Question 2, a series of regression equations were run to determine the mediation function of behavioral acculturation, testing Hypothesis 5. These regression equations and their correspondent results are presented below.

Equation 1: Regressing the outcome variable (Sexual Communication Findings) on the predictor variable (Cultural Construct Endorsement).

Results Equation 1: This equation was completed in the previous step, answering RQ1. As the results demonstrated in Hypothesis 1 – Hypothesis 4 and Table 7 (above), partial

evidence was found of a relationship between cultural values and beliefs, and sexual communication predictors and behavior. Subsequent steps in this investigation built upon the results of this first analysis, and included only the outcome variables that were significantly related to one or more predictor variable. This excluded the outcome variables comfort, efficacy and knowledge from all subsequent analyses since none were found to be statistically associated with any of the predictor variables in Equation 1.

Equation 2: Regressing the outcome variable (Sexual Communication Findings) on both the predictor variable (Cultural Construct Endorsement) and the mediator (Acculturation). In this stage, acculturation was added as an additional predictor variable to the five regression models that were found to be statistically significant in Equation 1. This consisted of the following two steps:

2a: Including BA as a predictor (as measured by the ARSMA II total score);

2b: Including the AOS/MOS individual subscales of the ARSMA II as predictors.

Results Equation 2a: A summary of the findings to Equation 2a is presented below in Table 8 and full regression models are presented in Appendix $I_1 – I_5$. The results indicate that of the five models, only one (Regression Model 2.8a, frequency) found an association that included behavioral acculturation as a significant predictor variable. According to the findings generated by Equation 2a, the outcome variable sexual

communication frequency is influenced by both the predictor variable *marianismo* and mediating variable behavioral acculturation among this study's female sample (n = 77). The addition of the behavioral acculturation variable in equation 2a revealed two new relationships: *respeto* and frequency, and *machismo* and frequency. Therefore, acculturation could not have mediated these associations and thus they were excluded from further mediation analysis.

Table 8

Significant Relationships Between Primary Predictor and Outcome Variables, and Behavioral Acculturation

PREDICTOR VARIABLES: Cultural Construct	OUTCOME VARIABLES: Sexual Communication Findings[a]							
		Self & Outcome Efficacy		General Communication				
	~~Model 2.1a Comfort~~	~~Model 2.2a Efficacy~~	Model 2.3a Expectancy	Model 2.4a Conversation	Model 2.5a Conformity	~~Model 2.6a Knowledge~~	Model 2.7a Intention	Model 2.8a Frequency
H1 Respeto								
H2 Fatalism								
H3 Machismo								
H4 Marianismo								
H5 BA								

Key: Full sample (solid); Female sample (vertical); Male sample (diagonal).

[a] Models that are crossed out are not included in Step 2 regression equations.

Results Equation 2b: A summary of the findings to Equation 2b is presented below in Table 9 and full regression models are presented in Appendix $J_1 - J_5$. The results indicate that of the five models, only one (Regression Model 2.8b, frequency) found an association that included an acculturation subscale as a significant predictor variable. According to the findings generated by Equation 2b, the outcome variable sexual

communication frequency is influenced by both the predictor variable *marianismo* and mediating variable AOS among this study's female sample (n = 77). Model 2.3b, expectancy was not included since the addition of the MOS variable in Equation 2b revealed the association between *machismo* and expectancy, therefore MOS could not have mediated this relationship between predictor and outcome variable. Model 2.7b, intention was excluded since mediation cannot occur across the male and female samples (MOS predicted intention among the male sample, while *respeto* predicted intention among the female sample). Lastly, the addition of the AOS variable revealed the relationship between *respeto* and frequency, negating the possibility of mediation. The relationship between respeto and frequency was subsequently excluded from further mediation analysis.

Table 9

Significant Relationships Between Primary Predictor and Outcome Variables, and AOS/MOS

PREDICTOR VARIABLES: Cultural Construct	OUTCOME VARIABLES: Sexual Communication Findings[a]							
		Self & Outcome Efficacy		General Communication				
	~~Model 2.1b Comfort~~	~~Model 2.2b Efficacy~~	Model 2.3b Expectancy	Model 2.4b Conversation	Model 2.5b Conformity	~~Model 2.6b Knowledge~~	Model 2.7b Intention	Model 2.8b Frequenc
H1 Respeto								
H2 Fatalism								
H3 Machismo								
H4 Marianismo								
H5 AOS								
H5 MOS								

Key: Full sample (solid); Female sample (vertical); Male sample (diagonal).

[a] Models that are crossed out are not included in Step 2 regression equations.

Equation 3, subsequently, built upon the results of Equations 2a and 2b, respectively and included only the three variables that were found to have significant associations thus far. These include: *marianismo*, frequency, and behavioral acculturation (from Equation 2a); and *marianismo*, frequency, and AOS (from Equation 2b).

Equation 3: Regressing the mediator (acculturation) on the predictor variable (*marianismo*). In this final step, we regressed acculturation on the predictor variable *marianismo*, testing path a in this study's mediator model. This consisted of the following two steps:

3a: Including BA as a predictor (as measured by the ARSMA II total score);

3b: Including the AOS individual subscale of the ARSMA II as a predictor.

Results Equation 3a: As depicted in Figure 2, the results of the regression equation between behavioral acculturation and *marianismo* failed to generate a statistically significant association (see Appendix K for regression model 3a). As a result, we can conclude that behavioral acculturation did not mediate the relationship between *marianismo* and sexual communication frequency; rather behavioral acculturation and *marianismo* independently predicted frequency among this study's female sample.

Figure 2: Marianismo/Behavioral Acculturation/Communication Mediation Model

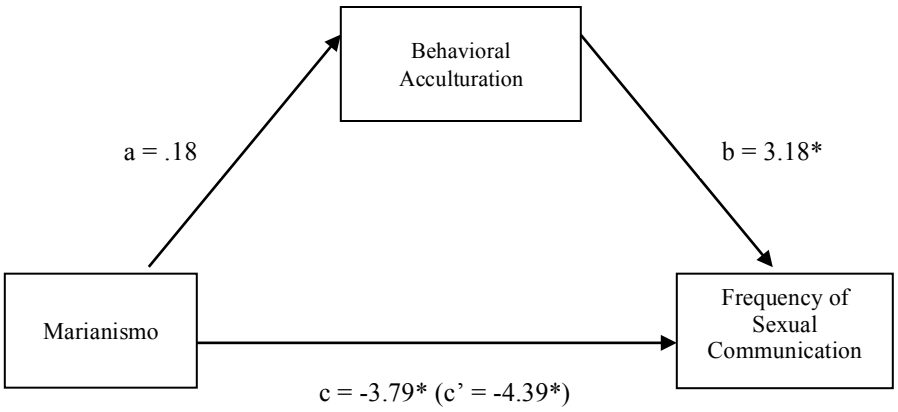


Figure 2. Standardized regression coefficients for the relationship between *marianismo* and frequency of sexual communication as mediated by behavioral acculturation. The standardized regression coefficient between *marianismo* and sexual communication frequency controlling for behavioral acculturation is in parentheses. *p < .05.

Results Equation 3b: As depicted in Figure 3, the results of the regression equation between AOS and *marianismo* failed to generate a statistically significant association (see Appendix K for regression model 3b). As a result, we can conclude that acculturation did not mediate the relationship between *marianismo* and sexual communication frequency; rather Anglo orientation and *marianismo* independently predicted sexual communication frequency among this study's female sample.

Figure 3: Marianismo/AOS/Communication Mediation Model

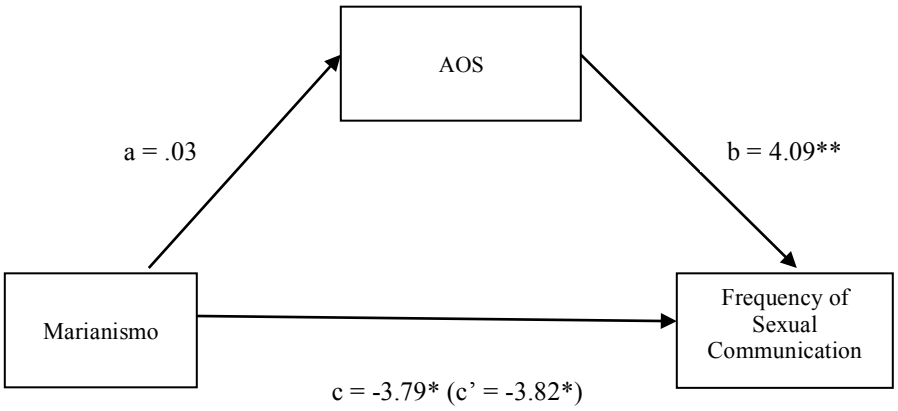


Figure 3. Standardized regression coefficients for the relationship between *marianismo* and frequency of sexual communication as mediated by AOS. The standardized regression coefficient between *marianismo* and sexual communication frequency controlling for AOS is in parentheses. *p < .05, **p<.01.

H5) It is predicted that behavioral acculturation will function as a mediating variable, influencing the significance of this study's predictor variables on its outcome variables.

The test of acculturation functioning as a mediating variable was not confirmed. The pathways necessary for mediation to occur were not adequately met. While path *b* and path *c'* resulted in significant associations, path *a* did not. In addition, path *c'* remained significant. The strongest demonstration of mediation occurs when path *c'* is reduced to zero, indicating that the mediator altogether eliminates the relationship between the predictor and outcome variables. I had predicted a significant reduction in path *c'* which would suggest partial mediation, yet this did not occur. Among this study's sample of

Mexican-origin parents, acculturation did not mediate the relationship between cultural construct endorsement and sexual communication findings. Therefore, Hypothesis 5 was not supported.

While acculturation did not act as a mediator between Latino culture and sexual communication, results indicate that one's acculturative status is an independent predictor of factors that are associated with parent-child sexual health dialogue. Among this study's male sample, Mexican orientation independently predicted the outcome variables expectancy and intention (see Table 8). Furthermore, both Behavioral Acculturation and Anglo orientation independently predicted Frequency among the total sample (see Tables 7 and 8, respectively).

RQ3. What is the effect of gender (parent's and child's) on the sexual communication findings of Mexican-origin parents?

To answer Research Question 3 we tested Hypotheses 6 and 7, measuring the effect of parent and child gender, respectively, on this study's sexual communication outcome variables. Two separate gender analyses were conducted, one comparing the influence of mothers to fathers on sexual communication findings, the other comparing the effect of having daughters compared to sons. Both analyses consisted of two principal steps. First, mean scores on each of the sexual communication outcome variables were compared. Second, gender coefficients (parent's gender

and child's gender, respectively) were examined in the context of this study's original regression models (presented in Appendix $H_1 - H_8$).

H6) It is predicted that mothers will report more frequent sexual health and safety communication with both their sons and daughters in comparison to fathers, and will also attain higher scores on the sexual communication predictor measures.

T-test results showed that of the eight outcome variables, only one revealed a significant difference between the means of mothers and fathers (see Table 3). As discussed previously, there was a significant difference between the means of women, $t(90) = 2.59$, $p<.05$, ($M = 10.86$, SD = 3.11) and men ($M = 8.68$, SD=3.83) on the outcome variable knowledge. Further analysis examined the coefficient values presented in Regression Model 1.6 Knowledge (see Appendix H_6), which controlled for eight additional predictor variables. The results revealed that among the total sample, parent's gender was a statistically significant predictor of knowledge [$\beta = 2.75$, $t(73) = 2.74$, $p<.01$]. On average, after controlling for cultural and demographic variables, the women in this study's sample were more knowledgeable about human sexuality than the men in this sample. In conclusion, mothers and fathers did not significantly differ on sexual health and safety communication frequency with either their sons or daughters. Also,

partial evidence that mothers would attain higher scores on the sexual communication predictor measures was found, thus partially supporting Hypothesis 6.

H7) It is predicted that parents will report more frequent sexual health and safety communication with their daughters than with their sons.

The frequency scores for both parents with daughters and parents with sons were compared. T-test results revealed that there was no significant difference between the means of parents with daughters, t(89) = .79, $p>.43$ (M = 23.27, SD = 9.19) and parents with sons (M = 24.88, SD = 10.25). An analysis of the regression coefficient values presented in Regression Model 1.8 Frequency (see Appendix H_8) confirms these results. In conclusion, parents in this sample did not significantly differ on sexual health and safety communication frequency with regard to daughters versus sons. As such, Hypothesis 7 was not supported.

Further analysis explored the influence of child gender on the seven sexual communication predictor variables. The data in Table 10 indicate that there was a marginally significant difference between the means of parents with daughters, t(88) = 1.96, $p<.053$, (M = 3.54, SD = 1.28) in comparison to parents with sons (M = 4.08, SD = 1.33) on the outcome variable comfort. Subsequently, coefficient values presented in Regression Model 1.1 Comfort (see Appendix H_1) were examined, which controlled for

eight additional predictor variables. The results revealed that among the full sample, child's gender was a statistically significant predictor of comfort [$\beta = -.79$, $t(75) = -2.46$, $p<.05$]. Communicating with daughters about sexual health and safety was associated with a .79 decrease in comfort as compared to communicating with sons.

Table 10

Bi-variate Means Testing on Outcome Variables by Child Gender

	Daughters (n = 51)*		Sons (n = 45)*		
Variable	*M*	*SD*	*M*	*SD*	*t-value*
Comfort	3.54	(1.28)	4.08	(1.33)	1.96^
Efficacy	77.39	(27.10)	72.21	(30.38)	.85
Expectancy	55.98	(11.27)	58.16	(11.60)	.92
Conversation	3.59	(0.45)	3.67	(0.42)	.88
Conformity	2.91	(0.49)	2.76	(0.59)	1.35
Knowledge	10.54	(3.16)	10.22	(3.66)	.45
Intention	2.60	(3.58)	3.37	(5.14)	.82
Frequency	23.27	(9.19)	24.88	(10.25)	.79

^ value is marginally significant (p = .053)

IV.VI. Analysis of Control Variables

The demographic variables that were controlled for in the final regression models, and their corresponding survey questions include: religiosity ("How important is religion to you?"), education ("What is the highest grade you have completed?"), income ("What is your total family income"), Target Child's gender, Target Child's age, the existence of older siblings ("How many children do you have?" and "What are their ages and genders?"), and participant's gender. The respondent's Target Child is their eldest daughter or son between 5 and 14 years of

age. Table 11 depicts the significant associations that were revealed in the regression data, presented according to parents' gender (full regression models are presented in Appendix H).

Table 11

Significant Relationships between Primary Predictor, Control, and Outcome Variables

PREDICTOR VARIABLES: Cultural Constructs	OUTCOME VARIABLES: Sexual Communication Findings							
		Self & Outcome Efficacy		General Communication				
	Model 1.1 Comfort	Model 1.2 Efficacy	Model 1.3 Expectancy	Model 1.4 Conversation	Model 1.5 Conformity	Model 1.6 Knowledge	Model 1.7 Intention	Model 1.8 Frequency
H1 Respeto					▒		▒	
H2 Fatalism			▒					
H3 Machismo				▒	▒			
H4 Marianismo				▒				▒
CONTROL VARIABLES:								
Religiosity	▒	▒				▒	▒	
Highest grade							▒	
Family income	▒	▒	▒					
Sex Target Child	▒							
Age Target Child							▒	▒
Older siblings		▒						▒
Gender						▒		

Key: Full sample (solid); Female sample (vertical); Male sample (diagonal).

Noticeably, the outcome variables expectancy, conversation, and conformity were all predicted exclusively by the four Latino cultural variables (see Section IV.V. for a description of the significant relationships that were identified). In contrast, comfort, efficacy, and knowledge were only significantly associated with the study's control variables. The final two, intention and frequency, were influenced by both the predictor and control variables in the current model. Presented below is a description of the seven control variables that were included in this study's regression models as they related to each of the eight sexual health predictor outcome variables.

Religiosity. Evidence of a significant relationship was identified between the control variable religiosity and four outcome variables, including comfort, efficacy, knowledge, and intention.

1. Comfort. Beliefs regarding religion was a statistically significant predictor of comfort among the total sample [$\beta = .36$, $t(75) = 2.01$, $p<.05$], such that each increase in religious importance score of 1 pt. was related to a .36 pt. increase in comfort. Tests revealed significant results among the women as well [$\beta = .56$, $t(56) = 2.63$, $p<.05$].
2. Efficacy. Regression results yielded significant positive outcomes among the total sample [$\beta = 9.71$, $t(74) = 2.31$, $p<.05$], as well as the female sample [$\beta = 12.53$, $t(55) = 2.42$, $p<.05$]. Each 1 pt. increase in religious importance score was associated with a 9.71 pt. increase in efficacy (12.53 among the female sample). In other words, the more strongly one feels about their religious beliefs, the greater the likelihood they will believe in their ability to discuss sexual health and safety with their Target Child.
3. Knowledge. Regression results yielded significant negative outcomes among the total sample [$\beta = -1.05$, $t(73) = -2.19$, $p<.05$], and the male sample [$\beta = -2.60$, $t(15) = -3.47$, $p<.01$]. Each 1 pt. increase in religious importance score was associated with a 1.05 pt. decrease in knowledge (2.60 pt. decrease among the male sample).

4. Intention. Beliefs regarding religion was a statistically significant predictor of Intention among the total sample [β = 1.22, t(72) = 2.58, p<.05], such that each increase in religious importance score of 1 pt. was related to a 1.22 pt. increase in Intention. Tests revealed significant results among the women as well [β = 1.38, t(54) = 2.64, p<.05]. Strongly embracing one's religious beliefs was thus associated with a greater intention to discuss sexual health and safety among mothers and fathers in this sample.

Highest grade. One's level of education significantly predicted their intention to discuss sexual health and prevention with their Target Child among this study's total sample [β = .77, t(72) = 2.03, p<.05], such that each increase in education score of 1 pt. was related to a .77 pt. increase in intention. In other words, parents' plans to discuss sexual health and safety with their child were positively associated with their level of education.

Family income was a statistically significant predictor of both comfort and efficacy.

1. Comfort. Regression results yielded significant negative outcomes among the total sample [β = -.29, t(75) = -2.02, p<.05], and the male sample [β = -.64, t(16) = -2.63, p<.05]. Each 1 pt. increase in total family income score was associated with a .29 pt. decrease in comfort (.64 among the male sample).

2. Efficacy. Among the total sample, family income was inversely related to efficacy [β = -6.52, t(74) = -2.00, $p<.05$], such that each 1 pt. increase in family income score was associated with a 6.52 pt. decrease in efficacy.

Sex of Target Child. As discussed previously in H7 (see Section IV.V.), Target Child's gender was a significant predictor of comfort.

Age of Target Child. Evidence of a significant relationship was identified between the Target Child's age and the outcome variables intention and frequency.

1. Intention. Target Child's age significantly predicted intention among the female sample [β = -.91, t(54) = -5.18, p<.001] and the male sample [β = -1.29, t(15) = -2.67, $p<.05$]. Each increase in child's age score of 1 pt. was related to a .91 pt. and 1.29 pt. decrease in intention score (females and males, respectively). To reiterate, this scale measured the intention to discuss sexual health and safety among parents who had not already done so. It can be implied from these results that the older a child becomes in the absence of parent/child sexual health dialogue, the lower the likelihood that these discussions will occur.
2. Frequency. Regression results yielded significant positive outcomes among the female sample [β = 1.52, t(56) = 3.27, $p<.01$] as well as the male sample [β = 2.05, t(16) = 3.33, $p<.01$]. Each 1 pt. increase in Target Child age score was related to a

1.52 pt. increase in sexual health communication frequency among the mothers in the sample, and a 2.05 pt. increase among the fathers. Thus, more frequent dialogue about sexual health and safety was associated with having an older Target Child in comparison to a younger Target Child.

Older siblings. Evidence of an inverse relationship was found between having older siblings (than the Target Child) and the two outcome variables, efficacy and frequency.

1. Efficacy. Having older siblings significantly predicted efficacy among the male sample [$\beta = -43.00$, $t(16) = -2.70$, $p<.05$], such that each increase in older siblings score of 1 pt. was related to a 43.00 pt. decrease in the father's efficacy score.
2. Frequency. Regression results yielded significant negative outcomes among the total sample [$\beta = -4.39$, $t(75) = -2.01$, $p<.05$]. Thus more frequent sexual health communication was associated with not having older siblings.

Participant's gender. As discussed in Hypothesis 6 (see section IV.V.), participant's gender significantly predicted the outcome variable knowledge. On average, after controlling for cultural and demographic variables, the women in this study's sample were more knowledgeable about human sexuality than the men in this sample.

Chapter V: Discussion

This chapter synthesizes and interprets the main findings for the study hypotheses and is comprised of the following three sections: Section 1 addresses the first research question and is broken down into four subsections that discuss the major findings for Hypotheses 1 – 4. Section 2 addresses the second research question and focuses on a discussion of Hypothesis 5. Section 3 addresses the third research question and is broken down into two subsections that discuss the major findings for Hypotheses 6 and 7.

Section 1. Research Question 1

The objective of Research Question 1 was to empirically investigate the influence of Latino cultural constructs on factors that predict sexual health communication between parents and their children. To answer this question, Hypotheses 1 – 4 were tested, measuring the influence of *respeto, fatalism*, *machismo*, and *marianismo*, respectively, on each of the eight sexual communication outcome variables. For each of the four hypotheses, it was predicted that the independent variable (cultural construct endorsement) would be inversely associated with the outcome variables (sexual communication findings). This would denote that *greater* endorsement of cultural beliefs, attitudes and values is related to *poorer* outcomes on factors that predict sexual communication. The one exception pertains to the outcome variable conformity, since this scale is scored in reverse. Thus a higher score on this measure has a negative

connotation and is indicative of greater use of parental authority to enforce a child's conformity to the parent.

Presented below are subsections 1.1 – 1.4 that review the major findings for Hypotheses 1- 4, respectively. Each subsection addresses the following three elements: (1) Review of the significant association(s) that are also implied in the literature; (2) Review of the association(s) that are implied in the literature, but not supported empirically in the present study; and (3) Identification of the significant association(s) that were revealed in this study's research findings but were not identified in the literature review.

As stated earlier, the body of research that explores how Latino culture influences factors that predict parent-adolescent sexual communication has been distinctly qualitative in nature whereby the relationships between variables are only conceptually implied. Providing empirical evidence that either supports or refutes the existing qualitative literature on Latino parent-adolescent sexual communication will inform sexual risk prevention initiatives that incorporate relevant aspects of Latino cultural beliefs and values into their curriculum.

Section 1.1. Hypothesis 1: Respeto

(1) Review of the significant association(s) that are also implied in the literature.

The present study found evidence of a significant positive relationship between *respeto* and conformity. To reiterate, conformity implies "the use of parental power to enforce the

child's overt conformity to the parent," and is associated with less communication in general (Ritchie & Fitzpatrick, 1990). Calzada, Fernandez, and Cortez (2010) conducted focus groups with Mexican immigrant and immigrant and U.S.-born Dominican mothers of preschoolers to understand the unique values of Latino parents. Mothers in their study identified *respeto* as an important value that represents the foundation of raising well-behaved children. The characteristics that encapsulate *respeto*, according to the study participants, include: obedience, conformity to authority, respect for elders (hierarchal aspect of *respeto*), the importance of appropriate behaviors in formal social interactions, and the importance of appropriate public behaviors. In their research on the incorporation of the construct *respeto* into a parenting framework, Calzada and colleagues state that parents who encourage their children to defer to adult wishes are choosing to transmit the value of deference over assertiveness (Calzada, Fernandez, & Cortes, 2010). In practice, this parent may choose to ignore her child's opinion rather than invite it. In another study, Guilamo-Ramos et al. (2007) assert that in Latino parent-child relationships, *respeto* refers to the deference given to parents because of their status in the parent-child hierarchical relationship. For Latino parents the loyalty, respect, and obedience of their children encompassed the Latino cultural value of *respeto* (Guilamo-Ramos, Dittus, et al., 2007). The finding in this work, therefore, that *respeto* is associated with conformity, is consistent with the literature.

(2) Review of the association(s) implied in the literature, but not supported empirically herein. The literature on factors that predict sexual health dialogue between Latino parents and their children implies a negative association between *respeto* and conversation. The present study, however, did not find evidence of this relationship. Research on communication styles that facilitate the discussion of sexual topics between parents and their adolescents asserts that open dialogue fosters the adolescent's health and well-being (Fisher, 1990; McKee & Karasz, 2006; Romo, Lefkowitz, Sigman, & Au, 2002; Romo et al., 2004). This style is embodied in the conversation orientation. While parents' use of open-ended questions is positively associated with adolescent engagement in conversations about sexuality (Romo et al., 2004), research suggests that Latino parents struggle with this approach due to their cultural beliefs regarding children and respect. Respectful behaviors are highly valued by Latino parents who expect their children to refrain from arguing or questioning the viewpoints of elders as this would signify a lack of respect (Benavides et al., 2006; Halgunseth et al., 2006; Romo et al., 2004). Although many children rely on "question asking," this form of parent-child communication may not be comfortable for Latino parents. As a result, Latino children may refrain from asking their parents questions about sexuality. An additional communication barrier that reflects parental endorsement of *respeto* is that Latino children will not participate in conversations unless invited

to do so (Delgado-Gaitan, 1994; Romo et al., 2004), which is characteristic of a low conversation orientation.

It is interesting, therefore, that differences in *respeto* did not predict differences in conversation. One possible explanation, borrowed from cultural change theory, is that Latino parents are adopting modified childrearing behaviors that they believe are more suitable to their lives in the U.S. This may be applicable to the ways in which they communicate in general with their children. Perhaps Latino parents, adapting to the realities of living in a society that greatly values open communication, continue to identify with particular aspects of *respeto* (i.e.: conforming to parental authority, as demonstrated above), but see less appeal in other aspects (i.e.: expecting their children to refrain from asking them questions or questioning the viewpoints of elders).

(3) Identification of significant association(s) found in empirical results but not supported in the literature. The present study found evidence of a significant inverse relationship between *respeto* and intention, although studies hypothesizing such a relationship were not found in the review of the literature. Interestingly, when acculturation was added to the model, intention and frequency were both found to be significantly associated with *respeto*. Although neither of these relationships was identified in the literature, the results of this research represent initial evidence

that *respeto* may in fact influence parents' intention to communicate with their children about sexual health, as well as how frequently they communicate.

Section 1.2. Hypothesis 2: Fatalism

(1) Review of the significant association(s) that are also implied in the literature.

The present study found evidence of a significant inverse relationship between *fatalism* and expectancy; qualitative evidence supports this association. According to expectancy theory, people who hold more positive views of behavioral outcomes are more likely to succeed in performing the behavior, whereas those who hold more negative views of potential outcomes are likely to give up or attribute their failure to external factors (Bandura, 1997). Research suggests that parents who endorse *fatalism* hold more negative views of potential outcomes associated with sexual health dialogue. For example, in a recent analysis of sexual communication between Latino mothers and their adolescents, it is revealed that some parents believe that talking to their teens about sex will have little or no impact on their adolescent's decisions about sex (Guilamo-Ramos, Dittus, et al., 2006). Antshel (2002) suggests that this perspective may reflect the cultural belief *fatalism* which argues that individuals can do very little to alter their fate (Antshel, 2002). In this context, a "master plan" provides teens with the guidance they need, and parents are unable to disrupt this plan, regardless of their intent (Guilamo-Ramos & Bouris, 2008). The association revealed in the present analysis thus supports the evidence found in the literature.

(2) Review of the association(s) implied in the literature, but not supported empirically herein. The literature on factors that predict sexual health dialogue between Latino parents and their children implies a negative association between *fatalism* and frequency, although the present study did not find evidence of such a relationship. In a recent (2009) study, Lescano and colleagues explored the impact of religiosity on HIV risk and identified specific aspects that may serve as risk factors. They suggest that the fatalistic notion that events in one's life result from factors beyond one's control may lead to the belief that efforts to protect oneself from HIV are in vain. In this case, they argue, there may be little communication between parents and youth regarding sex and protection. Additionally, Benavides et al. (2006) emphasize that in the context of sexual risk prevention, Latino parents need to understand that they can make a difference, especially given the assertion by some social scientists that Latino parents embrace *fatalismo*, or the belief that life is not controlled by individuals but shaped by a larger power that individuals cannot control. The authors suggest that such beliefs decrease parent–adolescent communication about sex.

In a separate regression equation that explored the influence of factors that predict sexual on frequency of sexual communication (discussed further in Chapter VI), it was revealed that expectancy was significantly associated with sexual communication frequency among the females in the sample. Based upon considerable evidence in the literature, this outcome was

expected. The absence of a relationship between fatalism and frequency of sexual communication could be the result of two factors: 1) neither fatalism nor expectancy are perfect predictors of communication frequency, and 2) the literature only implies an association between fatalism and frequency of communication.

(3) Identification of significant association(s) found in empirical results but not supported in the literature. This is not applicable as *fatalism*, in the present study, was only associated with expectancy.

Section 1.3. Hypothesis 3: Machismo

(1) Review of the significant association(s) that are also implied in the literature. The present study found evidence of a significant inverse relationship between *machismo* and conversation, and a significant positive relationship between *machismo* and conformity. In other words, greater endorsement of machismo was related to a decrease in conversation and an increase in conformity. Both of these associations are also supported in the literature. As described in Chapter II, research on family communication patterns indicates that when high and low levels of conversation orientation and conformity orientation are combined, there are four family types that emerge. These family types include laissez-faire, consensual, pluralistic, and protective. According to Koerner and Fitzpatrick (2006), protective families are low on conversation orientation and high on conformity orientation, comparable to the findings observed

in this sample relative to *machismo* endorsement. Further, these families are characterized by obedience to authority and little regard for open communication. This characterization coincides with traits belonging to *machismo*, specifically authoritarian behavior (deYoung & Zigler, 1994; Ferrari, 2002). Research suggests that authoritarian parents expect unquestioned obedience from their children and minimize verbal exchanges (Carlson & Tanner, 2006). The results found in the present analysis thus implicitly support the evidence in the literature.

(2) Review of the association(s) implied in the literature, but not supported empirically herein. The literature on factors that predict sexual health dialogue between Latino parents and their children implies a negative association between *machismo* and comfort, although the present study did not find evidence of this relationship. In two separate studies (2003, 1997), Marin et al. proposed that the notion of sexual comfort is inconsistent with traditional gender role norms. Results showed that both adult Latino men and women reported high levels of sexual discomfort.

While Marins' research proposed a negative association between *machismo* and comfort with sexual health communication, the results were not empirically tested. Therefore, while it is implied that comfort is influenced by gender role identity among Latino parents, it may be the case that other factors are responsible. Research indicates that many parents (not just Latino) are

uncomfortable with talking to their children about sex, so perhaps it is not *machismo* that contributes to the discomfort, but other factors (cultural or otherwise).

(3) Identification of significant association(s) found in empirical results but not supported in the literature. This is not applicable as *machismo*, in the present study, was only associated with conversation and conformity.

Section 1.4. Hypothesis 4: Marianismo

(1) Review of the significant association(s) that are also implied in the literature. The present study found evidence of a significant inverse relationship between *marianismo* and frequency; qualitative evidence supports this association. To illustrate, research suggests that Latino families may leave sexual discussions to mothers as they are deemed culturally responsible for child rearing. However, due to the cultural norm of *marianismo,* which encourages women to remain silent about sexual matters, children may not be receiving consistent, accurate information (Guilamo-Ramos, Dittus, et al., 2006). In addition, Carrillo (2002) describes the concept of "sexual silence" in Latino families in which topics of a sexual nature remain largely unspoken, particularly among women who endorse the cultural construct *marianismo*. The findings in the present study are thus consistent with the expectations identified in the literature.

(2) Review of the association(s) implied in the literature, but not supported empirically herein. The literature on factors that predict sexual health dialogue between Latino parents and

their children implies a negative association between *marianismo* and both comfort and knowledge, although these relationships were not revealed in the present study. Regarding comfort, the results of two studies conducted by Marin (1997 and 2003) that were described in Section 1.3, are also applicable to females who endorse the construct *marianismo*. Their findings indicated a negative relationship between *marianismo* and comfort. The explanation provided above regarding comfort and *machismo* (that other factors are responsible) is applicable to the absence of a relationship between comfort and *marianismo*.

With respect to knowledge, two studies state that from a young age, Latinas learn that "good" women are not supposed to know about sex (Cianelli et al., 2008; Deardorff, Tschann, & Flores, 2008). This notion is consistent with *marianismo*, which embodies emulation of the Virgin Mary as well as submissiveness and obedience in relationships (B. Marin & Gomez, 1997). Further, the Latina female socialization process, under the tenets of *marianismo*, has historically emphasized such traits as spiritual cleanliness and the height of morality (Garcia-Prieto, 1996). These attributes, originating from the Catholic worship of the Virgin Mary, are reflected in Latinas' knowledge, behavior and language. *Marianismo* embodies purity, asexuality, and sexual ignorance (Bourdeau et al., 2008), characteristics that foster inhibited communication about sexuality. The absence of an association between *marianismo* and

knowledge of sexual health and development may be attributed to the scale used to measure knowledge. This is discussed further in Chapter VI.

(3) Identification of significant association(s) found in empirical results but not supported in the literature. The present study found evidence of a significant inverse relationship between *marianismo* and conversation, although studies overtly hypothesizing such a relationship were not found in the review of the literature. While the literature did not reveal an association, the findings from the current study represent initial evidence that *marianismo* may in fact influence this particular aspect of general communication.

Section 2. Research Question 2, Hypothesis 5: Behavioral Acculturation as a Mediating Variable

The objective of Research Question 2 was to empirically investigate the mediating role of behavioral acculturation as it relates to the relationship between the endorsement of Latino cultural construct and predictors of sexual communication among Latino parents. As indicated in Chapter IV, the hypothesis that behavioral acculturation would function as a mediating variable, influencing the significance of this study's predictor variables on its outcome variables was not confirmed. The following two proposed reasons may have contributed to these results.

First, research indicates that the influence of mediator variables can be represented by two causal pathways that feed into the outcome variable. In the first pathway, the predictor

variable has a direct influence on the outcome variable. In the second pathway, the predictor variable has an influence on the mediator variable, which influences the outcome variable.

In the present study the first pathway was realized between the predictor variable *marianismo* and the outcome variable *frequency of sexual communication*. The second pathway, however, was not confirmed since the relationship between behavioral acculturation and *marianismo* was not statistically significant. The absence of an association between behavioral acculturation and *marianismo* explains why mediation did not occur in this study's model.

As described earlier, evidence suggests that changes in core cultural values during the acculturative process are likely to influence behaviors (Sabogal et al., 1987). Also, more acculturated individuals are generally less likely to endorse traditional Latino beliefs (B. Marin & Gomez, 1997). While research suggests that acculturative status may influence the cultural beliefs and attitudes of Latino parents, including their gender role identity, the specific impact of acculturation on Latina's adherence to *marianismo* it is not evident.

Gil and Vazquez (1996) explored the quandary faced by Latinas residing in the United States as they attempt to merge old world traditions with new world self esteem. They state that *marianismo* affords Latinas of previous generations a level of protection in society as a wife and a mother in their respective countries of origin. This confers an indirect measure of power and respect, and in some way, assures a life that is "free from loneliness and want" (Gil & Vazquez,

1996). However, gender role identify research has suggested that amongst today's acculturated Latinas in the United States, *marianismo* reflects an "invisible yoke which bind capable, intelligent, ambitious Latinas to a no-win lifestyle, because *marianismo* insists that Latinas live in a world which no longer exists and which perpetuates a value system equating perfection with submission" (Gil & Vazquez, 1996). Further, it has been argued that "*marianismo's* call for the noble sacrifice of self is the force which has prevented generations of Latinas to entertain the notion of personal validation" (Gil & Vazquez, 1996).

Moreover, researchers have noted that Mexicans who immigrate to the U.S. are more likely to retain their cultural identity than are other immigrant groups. Rueschberg & Buriel (1989) have noted that Mexican-Americans may experience pressure to maintain their Mexican values for several reasons, including; the U.S. is geographically connected to Mexico; and much of the immigration from Mexico is fairly recent. Therefore, in the Mexican-American population, it would be reasonable to assume that both overall attitudes toward family, as well as gender differences in these attitudes should remain similar to those of Mexican nationals (Rueschberg & Buriel, 1989).

It is possible, therefore, that Latina mothers maintain their beliefs regarding gender role identify, despite the process of acculturation. If this is the case regarding the present sample, one

would not expect behavioral acculturation to significantly influence mothers' endorsement of *marianismo*.

Second, it is possible that behavioral acculturation acted as a moderating variable in the present model as opposed to a mediating variable. A moderator is a third variable that influences the direction and or the strength of the relationship between the independent variable and the dependent variable (Baron & Kenny, 1986). In other words, a moderating variable specifies when certain effects will occur. To illustrate how this model would be applied in the present study: There is a significant relationship between *marianismo* (i.e., predictor variable) and *sexual communication frequency* (i.e., outcome variable). When behavioral acculturation is present, it weakens the relationship between *marianismo* and *sexual communication frequency*. In this example, behavioral acculturation functions as a moderator. Future research should further examine behavioral acculturation's role as a moderator in studies exploring the influence of Latino cultural values and attitudes on parenting behaviors, including the ways in which they communicate with their children about sexuality.

Section 3. Research Question 3

The objective of Research Question 3 was to empirically investigate the effect of gender (parent's and child's) on the sexual communication findings of Mexican-origin parents.

Hypothesis 6 addressed the gender of the parent, while the sex of the child was addressed in Hypothesis 7.

Section 3.1. Hypothesis 6: Parent's Gender

Hypothesis 6 predicted two outcomes related to the influence of parent's gender on the study's outcome variables. First, it was predicted that mothers would report more frequent sexual health and safety communication with both their sons and daughters in comparison to fathers. And second, it was predicted that mothers would attain higher scores on the sexual communication predictor measures.

The hypothesis that mothers would report more frequent sexual health communication than fathers was not confirmed. These findings contradict the literature on gender and familial communication about sexuality. One possible reason for this finding is the composition of this study's sample. As indicated in Chapter IV, males constituted a significant minority (20.6%) of the overall sample. Moreover, the fathers sampled had an overwhelming majority of sons (70%) in comparison to mothers with sons (40.3%), which may reflect a sampling bias. The small sample size, coupled with the disproportionate number of sons versus daughters, may have contributed to the findings observed in this study.

The hypothesis that mothers would attain higher scores on the sexual communication predictor measures was only partially confirmed. The findings indicate that the mothers attained

higher scores on one outcome variable, sexual health knowledge. The scale that was employed to measure subjects' knowledge of sexuality contained questions that pertained predominantly to women's health, including female reproductive biology, fertilization, menstruation, and birth control. Therefore, the outcome that was achieved was fairly predictable.

Section 3.2. Hypothesis 7: Child's Gender

Hypothesis 7 predicted that parents would report more frequent sexual health and safety communication with their daughters than with their sons. Contrary to evidence in the literature, this hypothesis was also not confirmed. As stated above, the composition of the sample may have contributed to these findings. An alternative explanation for this finding may be associated with the Target Child's age. As indicated previously, sexual health communication with children under the age of eleven occurs less frequently than with older adolescents across all racial and ethnic groups (Jean et al., 2009; Pluhar et al., 2008). Regression results indicate that Target Child's age significantly predicted frequency of communication among both the men and the women in the sample. Thus more frequent dialogue about sexual health and safety was associated with having an older child in comparison to a younger child. The average Target Child age in the present sample was only 10.6, therefore, it is possible that many parents had not yet initiated a dialogue with their child about sexual health, regardless of the child's gender.

Chapter VI: Conclusion

In separate studies on the sexual communication behaviors of Latino adolescents and their parents, results have implied that constructs rooted in cultural heritage may influence factors that predict communication about body safety and sexuality (Guilamo-Ramos & Bouris, 2008; Noland, 2006; Raffaelli & Ontai, 2004). The aim of the present study was to build upon previous research and further investigate potential barriers to effective sexual health and safety communication among Latino families that may be associated with cultural norms, beliefs and values. The results contribute to the sexual risk prevention literature in one essential way. While Latino culture is often acknowledged in the sexual health literature, research indicates that adherence to cultural norms is rarely measured (Raffaelli & Iturbide, 2009). The current study addressed this gap in the research and operationally defined elements of Latino culture using quantitative self-report measures.

VI.I. Limitations

Similar to other studies, the current study has some limitations which are important to consider when interpreting findings and drawing conclusions. The principle limitations, discussed below, pertain to measurement issues and composition of the sample.

With respect to measurement, the following four issues represent shortcomings in this research.

1. While the measures selected to determine adherence to Latino culture were each designed specifically for individuals of Latino-origin, the questionnaires that measured the sexual communication outcome variables were not. As noted by Ibanez (2007) in a study that explored the relationship between culture and parenting styles in Mexican families, there is a limited availability of standardized instruments normed with this population.
2. Another limitation in the current study is the marginal reliability of the knowledge scale. According to established standards, a good reliability coefficient is .70 or above (J. B. Hamilton, Crandell, Carter, & Lynn, 2010). Therefore, the reliability coefficient for the knowledge scale in the current study (.48) is marginal at best. Thus, the Miller-Fiske Knowledge scale may not have been the best measure of knowledge to use with this population, and the results of the current study may have been different if a more reliable measure had been used. A series of attempts were made to identify the reason for the low coefficient score.

First, to explain the patterns of correlations within this set of data, a principal component factor analysis was performed. To maximize variances of the factors, Varimax rotation was employed. The items in this measure grouped together in four dimensions, although these groups were not particularly meaningful. Also, their alpha scores did not generally improve (in one factor the coefficient score decreased). The

questions on the scale were disbursed across a range of topics, including: contraception, female reproductive biology, anatomy, fertility and easily debunked reproductive myths. It is possible that a person has knowledge in one particular domain and not another.

Second, readability was assessed by calculating the Flesch-Kincaid Grade Level for each question and then correlating that readability score with the percentage that got the question correct. According to this measure, the average readability was nearly a 10^{th} grade level (M = 9.94, SD = 3.41). This indicates that overall, the knowledge questions were asked at a high reading level. However, I did not find a relationship between readability and percentage correct [r(22) = 0.33, p>.05].

Third, the file was split by gender and the reliability estimates for this measure were re-calculated. The coefficient value for the females fell below the original coefficient value.

In sum, I believe the Miller-Fiske Knowledge of Sexual Health Scale was not very well suited for this study's population. The scale is quite long, it covers a considerable number of different concepts, and for this population, it doesn't appear to calibrate levels of knowledge well. Also, I believe readability was a factor, and lastly, it appeared at the very end of a long questionnaire.

3. Parents completed self-report measures about themselves and the beliefs and values they held about Latino cultural. They also completed measures about sexual communication, and factors that influence parent-child dialogue about sex. It is possible that some of the respondents were unwilling to answer particular items in a completely truthful manner, especially when responding to items of a sensitive nature.
4. The results of the present study demonstrated that efficacy was not predicted by any of the cultural predictor variables. The measure that was used to quantify efficacy, however, was designed for parents with adolescents between 11 and 14 years of age. The mean age of the child that was reported on in this research was 10.6.

The following two limitations pertain to this study's sample:

1. It is reasonable to assume that there was a possible bias in sample with regards to the male respondents. First, the present study was only able to collect surveys on 20 males (representing 20.6% of the sample). The fathers sampled had an overwhelming majority of sons (70%, $n = 14$) in comparison to mothers with sons (40%, $n = 31$). This may reflect the possibility that fathers with daughters opted not to participate, which is indicative of self-selection bias.

2. The study's sample consisted of men and women of Mexican-origin living in Boulder County, Colorado. The results obtained in this research, therefore, are not generalizable to other Latino groups residing in the U.S.

VI.II. Implications for Social Work Research and Practice

Despite the limitations discussed above, there are several important implications of the results of the current study. First, the development and implementation of family-based sexual risk prevention programs targeting Latino populations should consider pivotal aspects of Latino culture as research indicates that commonly-held beliefs and attitudes have some bearing on familial sexual health communication.

Second, culturally competent social work practice and research should consider the relationships that were identified in both the present study and in previous qualitative research. There were several convergent findings between the quantitative data herein and the qualitative results identified in the literature review. For instance, endorsement of *respeto* was associated with parents' expectation that their children conform to parental authority. This is consistent with previous research that examined, among Latino parents, the characteristics they most valued in their children. Both the quantitative and qualitative data suggest that parents' who endorse *fatalism* hold more negative views of potential outcomes associated with talking to their children about sexual health. The present study found evidence of a significant negative relationship

between *machismo* and critical elements of effectual family communication. Greater endorsement of *machismo* was related to both a decrease in open communication and an increase in conformity expectations. Both of these associations are also supported in the literature. And lastly, both the quantitative and qualitative data suggest that Latina mothers who endorse *marianismo* are less likely to engage in discussions with their children about sexual health and safety.

Although there were several convergent findings between the qualitative and quantitative data, there were also several divergent findings that are worth exploring. For example, *respeto* influenced intention in the quantitative results of the present study but this relationship has not been implied in research. Also, the review of the literature did not reveal an inverse association between *marianismo* and open conversation yet this relationship was discovered in this study.

Third, research recommends that practitioners capitalize on explicit aspects of Latino cultural values as a vehicle for sexual risk prevention (National Council of La Raza, 2006). Studies have demonstrated the protective value associated with endorsing traditional beliefs, and recommend that interventions incorporate salient aspects of Latino culture into their sexual health models. Guilamo-Ramos and Bouris (2008) suggest that practitioners collaborate with families to identify cultural values that can be conveyed to adolescents (including *respeto,*

machismo and *marianismo*), and explore how they can be used to support sexual communication efforts.

Both risk and protective factors are associated with culture (Korbin, 2002). While *machismo* is often associated with negative attributes, particularly with regard to the sexual roles of men, the positive aspects of this construct can influence the communication outcomes between fathers and their children in the name of protection. Under the tenets of *machismo*, the male assumes the responsibility for maintaining the welfare and honor of the family. This includes protecting his female relatives from the sexual advances of other men (Comas-Diaz, 1988). Therefore, a prevention model that is culturally appropriate can assist parents in empowering their children and transmit acknowledgement of gender roles as a protective behavior, specifically by highlighting the positive aspects of machismo (Guilamo-Ramos, Dittus, et al., 2006). Research suggests that practitioners can harness the positive dimensions of *machismo* and *marianismo* and frame condom use as taking responsibility for one's family (A.M. Villarruel et al., 2005).

One example of this strategy's implementation is "Cuidate!," a culturally designed HIV prevention program targeting Latino adolescents. It's curriculum incorporated salient aspects of Latino culture by emphasizing the cultural concepts of *familism* and gender-role expectations and how they influence attitudes, beliefs, and motivation in ways that affect HIV risk–associated

sexual behavior. Abstinence and condom use are presented as culturally accepted and effective ways for men and women to prevent sexually transmitted diseases, including HIV (Mueller et al., 2009). Cultural values that support safer sex are highlighted, while cultural values that have been perceived as barriers to safer sex are reframed to support safer sex behaviors. To illustrate, a definition of *machismo* is presented that includes many commonly-held stereotypes and beliefs, and subsequently another view of *machismo* is presented that incorporates the values of caring for and protecting others and assuming responsibility for keeping the family safe. Under these circumstances, the presentation of condom use is consistent with the value of *machismo*—taking responsibility for oneself and caring for one's partner and family (A.M. Villarruel et al., 2012).

Another example is *Be Proud! Be Responsible!,* a sexual risk prevention initiative for Latino adolescents. Their curriculum includes an image of Latina women that incorporates typical stereotypes. Views of fidelity and abstinence as behaviors that are consistent with this view of women is reinforced. Condom use is presented as taking responsibility for one's family, thus presenting it as acceptable for women to carry condoms for the purpose of initiating discussion about their use, and to refuse sex if necessary (Jemmott, 2012).

In their research on cultural constructs endorsed by Mexican Americans, Cuellar, Arnold and Gonzalez (1995) assert that *fatalism*, as a personality factor, is an important measure in the study of individual differences and in the perception of personal control. Moreover, they suggest

that fatalistic attitudes are adaptive. These findings are directly applicable to Latino sexual risk prevention research that seek to understand how culture can be incorporated into the framework of prevention strategies.

VI.III. Policy Implications

One essential component of PREP, the federally-funded sexual risk prevention program described in Chapter II, involves teaching parent-child communication skills (Guttmacher Institute, 2012). The inclusion of communication in recent sex education policy recognizes the emergent body of evidence on adolescent sexual risk, which asserts that parent-adolescent communication is a valuable and necessary component of prevention (SIECUS, 2004). Research demonstrates that there is tremendous variation in the sexual health curriculum that is provided in U.S. schools, and many adolescents (particularly Latinos) are not receiving adequate information to prevent sexual risk. Too illustrate, recent research indicates that more than 15% of high school students reported not being taught about HIV or AIDS in school (CDC, 2011b). In addition, financial support for school-based sexual health education fell by 25% last year, further supporting the need to provide additional funding to government efforts that specifically address family-based sexual health education.

VI.IV. Recommendations for Future Research

The important implications from the findings of this study suggest that additional research would be beneficial in continuing to elucidate the influence of Latino cultural attitudes, beliefs and values on parent-child sexual communication. These efforts can build upon the results of the current study in several ways.

Address familism. Future research should explore further the role *familism* in adolescent sexual risk prevention. Research suggests that *familism*, a commonly held traditional Latino family construct, may function as a protective factor for Mexican-origin adolescents. Examining values inherent to *familism* as a protective resource is consistent with recent recommendations in child development to study adaptive aspects of culture (Garcia Coll, Akerman, & Cicchetti, 2000). Moreover, it is recommended that analyses moves beyond simple main effect designs to study the conditions under which core cultural values such as *familism* represent a source of strength or weakness for Latino families.

Familism symbolizes a set of normative beliefs espoused by Latino populations that emphasize the centrality of the family unit and stress the obligations and support that family members owe to both nuclear and extended kin (Sabogal et al., 1987). *Familism* embodies core cultural values for Latinos that are transmitted from generation to generation through socialization strategies and interactions that parents have with their children (Bronfenbrenner,

1979). Roosa and colleagues (2002) theorize that *familism* values guide Latino parents' selection of childrearing strategies that directly promote youth behavior that is consistent with these values.

In exploring the role of *familism* in adolescent sexual risk prevention, future studies should include survey questions addressing the role of grandparents who are either living in the home and/or acting as a caregiver. Living with extended family members is very common among Latino populations. According to a recent (2008) national survey, Latinos (22%) are significantly more likely than Whites (13%) to live in a multi-generational family household (Pew Research Center, 2008), a trend that is reflected in household size. On a local level, recent survey data show that the average household size in Boulder County was nearly a third higher among Latino families in comparison to White families, 3.91 vs. 3.03, respectively (Boulder County Movement for Children, 2012).

It would be useful to explore the influence of a multi generational household on a range of outcome measures, including the variables selected for this study. It is possible that the transmission of cultural values and the rate at which a person becomes accultured are both significantly affected by the continual presence of a parent. Furthermore, the parent's company may also influence the general communication style between the parent and child, and discussions about sexual health and safety.

Explore the content of sexual communication. Future studies should explore the influence of culture on different aspects of sexual health communication. The foundation of the current research was based upon exploring how culture influences factors that predict parent/child sexual communication. As we know from the literature, the predictive factors that were selected for inclusion are significantly associated with the frequency of sexual communication that occurs within families. Research suggests, however, that while greater communication frequency is predictive of decreased adolescent sexual risk behavior, studies should also explore factors that influence the *content* of communication between parents and their children (A.M. Villarruel et al., 2012). The literature indicates that Latino parents struggle with discussions about the more technical aspects of sexuality, such as birth control and contraception, either because they lack the knowledge or they believe they will encourage adolescent sexual activity (Guilamo-Ramos, Dittus, et al., 2006; Raffaelli & Green, 2003). Longitudinal studies, however, show that parental communication about contraception was associated with less sexual risk-taking with Latino adolescents (Hutchinson, Jemmott, Jemmott, Braverman, & Fong, 2003). Therefore, further research that examines the influence of Latino cultural beliefs, attitudes and values on the content of parent-child sexual communication is warranted.

Evaluate the effectiveness of cultural inclusion. The role of culture in mental health

interventions has been the subject of recent investigation within the field of ethnic minority psychology (Elliott & Urquiza, 2006). Researchers are recommending the systematic identification and operationalization of elements of culture, and have begun to identify values that are explicitly present in particular ethnic populations. This process allows for integrating cultural constructs into the study of ethnic differences in mental health research. According to Villarruel and colleagues (2005), the process of recognizing the influence of specific cultural and contextual variables is an important element in the design of culturally effective interventions.

Consistent with sociocultural strategies, Marín (1993) challenges "window-dressing" approaches and suggests that designing culturally appropriate interventions include basing the intervention on the cultural values of the targeted group and ensuring that interventions reflect the attitudes, expectancies, and norms of the target population regarding a particular behavior. Such strategies would include using cultural values to provide meaning and context to health information and programs (G. Marin & Marin, 1991). Future research should empirically explore the inclusion of culture in Latino adolescent sexual prevention efforts, and review the findings in the context of the existing knowledge base to support the development of prevention strategies that are culturally appropriate.

Develop standardized measures that are normed with Latino parents. Given recent sexual risk trends, identifying risk and protective factors for Mexican-origin adolescents is

critical to inform culturally sensitive treatment and prevention. It is essential, however, that the measures used to determine the level of risk and protection among Latino adolescents and their families are culturally appropriate. As stated above, there is a limited availability of standardized instruments normed with this population, therefore additional research is warranted to support the development of measures that specifically target Latino populations.

Further explore the role of gender role identity on adolescent sexual risk. A number of studies have demonstrated that greater levels of perceived parental openness and responsiveness were associated with lower levels of adolescent sexual risk behavior (Guilamo-Ramos, Dittus, et al., 2006; Halpern-Felsher, Kropp, Boyer, Tschann, & Ellen, 2004). Perceptions of parental accessibility were also found to be associated with lower levels of adolescent sexual behavior (Guilamo-Ramos, Jaccard, Dittus, & Bouris, 2006; K. S. Miller, Kotchick, Dorsey, Forehand, & Ham, 1998). These positive communication traits are characteristic of a conversation orientation which encourages the open exchange of ideas and feelings (Fitzpatrick & Ritchie, 1994). While adolescent sexual risk behavior was not the subject of the current research, it is important to consider the negative association that was revealed between Latino gender roles and effective familial communication. Similar to the current study's premise, understanding the factors that underlie open communication merits further investigation, including an examination of Latino gender roles and their respective influence.

Research with Latino families has identified three critical factors associated with preventing unintended pregnancies, STIs and HIV, including parent–adolescent communication, parent–adolescent relationship quality, and parental monitoring and supervision (Guilamo-Ramos et al., 2012). The home and family thus represent the one common environment wherein the adaptation of communication patterns that address sexual risk can be nurtured (Rios-Ellis, 2012).

Research demonstrates that identifying the cultural norms of the targeted population and incorporating salient aspects into a prevention strategy allows for greater acceptance and more effective outcomes (Fontes, 2005; Guilamo-Ramos & Bouris, 2008; Vega & Lopez, 2001). The information obtained from this study will contribute to the relative scarcity of culturally-appropriate resources (Sabatiuk & Flores, 2009; A.M. Villarruel et al., 2005) and can be used to inform and improve culturally-relevant, parent-focused interventions that seek to increase parent-child communication about sexuality, promote healthy sexual development, and decrease sexual risk among children and adolescents.

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Appendix A

IRB Approval Letter

Review Correspondence
Protocol Number: IRB-AAAJ0256 Protocol

Notification Date: **02/15/2012**

From: **IRB Office**

To: **Researcher**

Subject: **RASCAL IRB Protocol IRB-AAAJ0256 (Protocol)**
Protocol (Expired)

Text:

On February 6, 2012, the above-mentioned study was reviewed and approved by the Chair or Designee of Columbia University Institutional Review Board (IRB). It met the regulatory guidelines for expedited review, category # 7. You may now begin human research for this study.

During the approval period, all subjects enrolled not only must provide voluntary informed consent to participate in the study, but also must sign a copy of the appropriate stamped consent document(s). A copy of the consent document(s) must be given to the subjects for their record.

The following study-related materials were approved:
Appendix A Questionnaire revised 1.31.2012
Appendix F Consent Form
Appendix E Permission to Recruit
Appendix D Verbal Recruitment
Appendix C Recruitment Flyer
Appendix B Scale Description
Appendix A Questionnaires
CF - AAAJ7018

Note to Investigator: Individual Investigator Agreements (IIA) for those unaffiliated with CU must be signed by the unaffiliated individuals and sent to George Gasparis for his signature before these individuals may begin.

Any proposed changes in the protocol must be immediately submitted to the IRB for review and approval prior to implementation, unless such a change is necessary to avoid immediate harm to the participants. Additionally, any unanticipated problems that involve risks to subjects must be reported to the IRB in accordance with the CUMC Unanticipated Problems: Reporting to the IRB of Unanticipated Problems Involving Risks policy, dated January 24, 2008. All submissions for modifications and unanticipated problems must be submitted through RASCAL.

Renewal applications should be submitted 60 days before the expiration date of this study through RASCAL. Failure to obtain renewal of your study prior to the expiration date will require discontinuance of all research activities for this study, including enrollment of new subjects. You must inform the IRB in writing when your study has been completed.

If you have any questions regarding this approval, please call (212) 851-7040.

Columbia University appreciates your commitment towards the ethical conduct of human research.

Appendix B

Informed Consent Form

Columbia University Morningside Consent Form

Attached to Protocol: IRB-AAAJ0256

Principal Investigator: Michael MacKenzie (mm3038)

IRB Protocol Title: The influence of Latino cultural values, beliefs, and behaviors on the sexual communication behaviors of parents with young children.

Consent Number: CF-AAAK5539

Participation Duration: 45 minutes

Anticipated Number of Subjects: 100

Research Purpose

The purpose of this research study is to explore how Latino cultural values, beliefs and behaviors affect parent's discussions with their children about sexual health and safety.

Information on Research

This research study is being done to learn more about how Latino cultural values, beliefs and behaviors affect discussions between parents and their children about sexual health. You are being asked to take part in this study because you are a parent of Mexican descent with an elementary or middle school-age child between 5 and 14 years old. Also, you live in Boulder County, Colorado. About 100 people are expected to be enrolled in this study. If you agree to participate, you will be asked to fill out 11 multiple-choice questionnaires. Some of the items will measure your feelings and attitudes about Latino cultural values and behaviors. Other items will measure your opinion about talking with your child about sexual health. Examples include "How often do you talk about reproductive health and safety?" "How comfortable you are with these discussions?" and "When you plan on talking about sexual health with your child?" It is expected to take between 45 minutes and 1 hour to complete these questionnaires. You can refuse to answer any item on any questionnaire.

Benefits

Sexual health education programs are most effective when they are based upon a person's cultural values. This study is designed for the researcher to learn more about the relationship between Latino cultural values and the way parents talk with their kids about sexual health. This information may later be used to improve the cultural sensitivity of programs that are designed to help Latino teens make healthy choices and avoid sexual risk. Subjects will not receive any direct benefit from participating in this study.

Risks

Given the sensitive nature of some of the questions, completion of this questionnaire may be psychologically stressful. Please work at your own pace and stop as often as you like. In addition, if you do experience feelings of anxiety as a result of this questionnaire, and would like to share your feelings with someone, you will be referred to an appropriate mental health provider.

Confidentiality

To maintain confidentiality, your name will only appear on the Informed Consent form. There will be no identifying information on the questionnaire packet. You will instead be given a study ID that will appear on each of the questionnaires. Results from the study will only be linked to your study ID, not your name. This link will be maintained on a database that is kept on a secure computer (password-protected) in a locked office. Any hard copies linking your ID and identifiers will be kept in a locked portable file box and immediately transferred to a locked office.

Compensation

You will receive a $15 Target gift card to thank you for your participation.

Voluntary Participation

Taking part in this study is your choice. You may refuse to take part in the study or withdraw from the study at any time.

Contact Information

If at any time you have questions or concerns about your rights or welfare as a research subject, contact the Columbia University Morningside Institutional Review Board (IRB) at 212-851-7040 or 212-851-7044 (fax) or email askirb@columbia.edu.

Signature

Study Participant

Print Name_____Signature_____Date & Time_____

Person Obtaining Consent

Print Name_____Signature_____Date & Time_____

Appendix C

Demographic Questionnaire

Please mark the appropriate box next to your answer choice with an "x".

Are you male or female?

- ☐ Male
- ☐ Female

Where were you born?

- ☐ Mexico
- ☐ U.S.A.
- ☐ Other _____

What generation best applies to you?

- ☐ 1st generation = you were born in Mexico (or another country)
- ☐ 2nd generation = you were born in the U.S., and either of your parents was born in Mexico (or another country)
- ☐ 3rd generation = you and your parents were born in the U.S.

Are you a member of a religious denomination?

- ☐ Yes
- ☐ No

How important is religion to you?

- ☐ Not at all important
- ☐ Somewhat important
- ☐ Quite important
- ☐ Very important

What is your age? _____

Which of the following comes closest to describing your race?

- ☐ Caucasian or White
- ☐ Latino or Hispanic
- ☐ African American or Black
- ☐ Asian
- ☐ American Indian or Alaska Native
- ☐ Native Hawaiian or other Pacific Islander
- ☐ Other _____

How many years (total) have you lived in the U.S.A.? _____

If yes, what is your affiliation?

- ☐ Catholic
- ☐ Lutheran
- ☐ Episcopalian/Anglican
- ☐ Church of Christ
- ☐ Baptist
- ☐ Presbyterian
- ☐ Jewish
- ☐ Methodist
- ☐ Mormon/Latter Day Sts
- ☐ Non-Denominational
- ☐ Other _____

What is the highest grade you have completed?

- ☐ Never attended school
- ☐ Less than 8th grade
- ☐ Did not graduate from high school
- ☐ High school graduate
- ☐ Trade school
- ☐ Some college but did not graduate
- ☐ College degree
- ☐ Professional training beyond college

How many children do you have? _____

What are their ages and genders?

	Child's Age		
1)	_____	☐ Boy	☐ Girl
2)	_____	☐ Boy	☐ Girl
3)	_____	☐ Boy	☐ Girl
4)	_____	☐ Boy	☐ Girl
5)	_____	☐ Boy	☐ Girl
6)	_____	☐ Boy	☐ Girl
7)	_____	☐ Boy	☐ Girl
8)	_____	☐ Boy	☐ Girl

What is your marital status?

- ☐ Married
- ☐ Not married but living with partner
- ☐ Separated or divorced, (not living with partner)
- ☐ Single, not living with a partner
- ☐ Widowed

What is your *total* family income?

- ☐ $0 - $10,000
- ☐ $10,000 - $20,000
- ☐ $20,000 - $30,000
- ☐ $30,000 - $40,000
- ☐ $40,000 - $50,000
- ☐ $50,000 or above

Appendix D_1

Cultural Construct Measures: *Respeto*

Please check the box with an "x" the answer that best describes your beliefs about the following 10 statements.

	Disagree			Agree		
	Strongly	Moderately	A little	Strongly	Moderately	A little
1. It is best for the child's future if the child obeys and complies with the ideas of their parents.	☐	☐	☐	☐	☐	☐
2. Even if a child thinks that their parents are wrong they must obey their parents unconditionally.	☐	☐	☐	☐	☐	☐
3. Children must respect all adults.	☐	☐	☐	☐	☐	☐
4. The words of an adult should not be questioned.	☐	☐	☐	☐	☐	☐
5. It is important that children respect their elders.	☐	☐	☐	☐	☐	☐
6. It is especially important that children show/demonstrate respect to all adults.	☐	☐	☐	☐	☐	☐
7. It is disrespectful for children to call adults/elders/authority figures by their first name.	☐	☐	☐	☐	☐	☐
8. Children must obey their parents without questioning them.	☐	☐	☐	☐	☐	☐
9. When a parent is scolding/ disciplining their child, it is disrespectful for the child to make direct eye contact with their parents.	☐	☐	☐	☐	☐	☐
10. When there is a disagreement between a parent and a child, the child should remain silent.	☐	☐	☐	☐	☐	☐

Appendix D_2

Cultural Construct Measures: *Fatalism*

Please check the box with an "x" the answer that best describes your beliefs about the following 8 statements.

	True	False
1. It is more important to enjoy life now than to plan for the future.	☐ True	☐ False
2. People die when it is their time and there is not much that can be done about it.	☐ True	☐ False
3. We must live for the present, who knows what the future may bring.	☐ True	☐ False
4. If my doctor said that I was disabled, I would believe it even if I disagreed.	☐ True	☐ False
5. It is not always wise to plan too far ahead because many things turn out to be a matter of good and bad fortune anyway.	☐ True	☐ False
6. It doesn't do any good to try and change the future because the future is in the hands of God.	☐ True	☐ False
7. When I make plans, I am almost certain I can make them work.	☐ True	☐ False
8. I sometimes feel that someone controls me.	☐ True	☐ False

Appendix D_3

Cultural Construct Measures: *Machismo*

MALE participants, please check the box with an "x" the answer that best describes your beliefs about the following 17 statements.

		True	False
1.	A man should not marry a woman who is taller than him.	☐ True	☐ False
2.	It is a mother's special responsibility to provide her children with proper religious training.	☐ True	☐ False
3.	Boys should not be allowed to play with dolls, and other girls' toys.	☐ True	☐ False
4.	Parents should maintain stricter control over their daughters than their sons.	☐ True	☐ False
5.	There are some jobs that women simply should not have.	☐ True	☐ False
6.	It is more important for a woman to learn how to take care of the house and the family than it is for her to get a college education.	☐ True	☐ False
7.	A wife should never contradict her husband in public.	☐ True	☐ False
8.	Men are more intelligent than women.	☐ True	☐ False
9.	No matter what people say, women really like dominant men.	☐ True	☐ False
10.	Some equality in marriage is a good thing, but by and large the father ought to have the main say so in family matters.	☐ True	☐ False
11.	For the most part, it is better to be a man than a woman.	☐ True	☐ False
12.	Most women have little respect for weak men.	☐ True	☐ False
13.	I would be more comfortable with a male boss than a female boss.	☐ True	☐ False
14.	It is important for a man to be strong.	☐ True	☐ False
15.	Girls should not be allowed to play with boys' toys such as soldiers and footballs.	☐ True	☐ False
16.	Wives should respect the man's position as head of household.	☐ True	☐ False
17.	The father always knows what is best for the family.	☐ True	☐ False

Appendix D_4

Cultural Construct Measures: *Marianismo*

FEMALE participants, please circle the number that best describes how you feel about the following 28 statements.

	Strongly disagree	Some-what disagree	Do not agree or disagree	Some-what agree	Strongly agree
1. I find myself doing things for others I'd prefer not to	1	2	3	4	5
2. I feel guilty when I ask others to do things for me.	1	2	3	4	5
3. I feel proud when others praise me for the sacrifices I have made.	1	2	3	4	5
4. I often take on responsibilities having to do with my family.	1	2	3	4	5
5. I often find myself doing things that will make my family happy even when I know it's not what I want to do.	1	2	3	4	5
6. I have difficulty expressing my anger.	1	2	3	4	5
7. I often take on the responsibilities with my family, that I'd rather not take, because it makes me feel like a better person.	1	2	3	4	5
8. I often feel inferior in comparison to men.	1	2	3	4	5
9. I consider my family a great source of support.	1	2	3	4	5
10. I find it difficult to say "no" to people even when it is clear that "no" is what I should be saying.	1	2	3	4	5
11. Family is very important to me.	1	2	3	4	5
12. I feel guilty when I go against my parent's wishes.	1	2	3	4	5
13. I have difficulty asserting myself to figures of authority.	1	2	3	4	5
14. I often put myself down in relation to figures of authority.	1	2	3	4	5
15. I try to make others happy at all costs.	1	2	3	4	5
16. I try to make my family happy at all costs.	1	2	3	4	5

	Strongly disagree	Some-what disagree	Do not agree or disagree	Some-what agree	Strongly agree
17. I believe sacrificing yourself for others makes you a better person.	1	2	3	4	5
18. I find myself putting others' needs in front of my own.	1	2	3	4	5
19. Being seen as a "good" person by others is very important to me.	1	2	3	4	5
20. I find myself putting my family's needs in front of my own.	1	2	3	4	5
21. I find myself believing that any criticism or conflict is caused by my own faults.	1	2	3	4	5
22. I believe that sacrificing for others will eventually be rewarded.	1	2	3	4	5
23. Making my partner happy makes me feel good about myself.	1	2	3	4	5
24. I feel like a terrible person when I know someone is upset or disappointed with me.	1	2	3	4	5
25. I find myself accepting maltreatment from a partner (i.e., cheating, physical abuse, emotional abuse, etc).	1	2	3	4	5
26. I can express my needs to my partner.	1	2	3	4	5
27. I have allowed partners to take sexual liberties with me even when I did not want to.	1	2	3	4	5

28. I have allowed partners to take sexual liberties with me because: (check all that apply)

- ☐ They will leave me?
- ☐ I will hurt their feelings?
- ☐ I will be seen in a negative light?
- ☐ I will be hurt physically?
- ☐ They will cheat on me?
- ☐ Other

Appendix E_1

Sexual Health Communication Measures: Comfort

Please circle the number that best describes your actual (or anticipated) level of comfort discussing each of the 15 sexual health topics with your child.

	Totally comfortable	Mostly comfortable	Tend to feel comfortable	Tend to feel un-comfortable	Mostly un-comfortable	Totally un-comfortable
1. Birth	1	2	3	4	5	6
2. Body differences	1	2	3	4	5	6
3. Reproduction	1	2	3	4	5	6
4. Sexual morals	1	2	3	4	5	6
5. Venereal disease	1	2	3	4	5	6
6. Contraception	1	2	3	4	5	6
7. Obscene words	1	2	3	4	5	6
8. Sexual intercourse	1	2	3	4	5	6
9. Petting	1	2	3	4	5	6
10. Rape/Sexual offenses	1	2	3	4	5	6
11. Abortion	1	2	3	4	5	6
12. Menstruation	1	2	3	4	5	6
13. Homosexuality	1	2	3	4	5	6
14. Masturbation	1	2	3	4	5	6
15. Wet Dreams	1	2	3	4	5	6

Appendix E_2

Sexual Health Communication Measures: Self-Efficacy

Please circle the response that best describes how you currently feel.

	(1) not at all sure	(2)	(3)	(4)	(5)	(6)	(7) completely sure
How sure are you that you can always explain to your adolescent …							
1. How to use birth control pills	1	2	3	4	5	6	7
2. Where to buy/get birth control pills	1	2	3	4	5	6	7
3. How birth control pills keep girls from getting pregnant	1	2	3	4	5	6	7
4. Where to buy or get condoms	1	2	3	4	5	6	7
5. How to put on a condom	1	2	3	4	5	6	7
6. Why an unmarried person should use a condom when they have sex	1	2	3	4	5	6	7
7. That s/he should use condoms if s/he decides to have sexual intercourse	1	2	3	4	5	6	7
8. What is happening when a girl has her period	1	2	3	4	5	6	7
9. Why wet dreams occur	1	2	3	4	5	6	7
10. How someone can get AIDS if they don't use a condom	1	2	3	4	5	6	7
11. What you think about adolescents his/her age having sex	1	2	3	4	5	6	7
12. How to tell if a boy/girl really loves him/her	1	2	3	4	5	6	7
13. Why he/she should wait until s/he is older to have sexual intercourse	1	2	3	4	5	6	7
14. How to make a boy/girls wait until he/she is ready to have sex	1	2	3	4	5	6	7
15. How to tell a boy/girl no if he/she does not want to have sex	1	2	3	4	5	6	7
16. Ways to have fun with a boy/girl without having sexual intercourse	1	2	3	4	5	6	7

Appendix E_3

Sexual Health Communication Measures: Outcome Expectancy

	(1) strongly disagree	(2)	(3)	(4)	(5) strongly agree
If you talk with your adolescent (child) about sex topics…					
1. You will feel like a responsible parent	1	2	3	4	5
2. You will feel that you did the right thing	1	2	3	4	5
3. You will be proud	1	2	3	4	5
4. You will be embarrassed	1	2	3	4	5
5. You will feel comfortable	1	2	3	4	5
6. You would find some things difficult to talk about	1	2	3	4	5
7. It would be unpleasant	1	2	3	4	5
8. You will feel ashamed	1	2	3	4	5
9. You will find these issues easy to talk about	1	2	3	4	5
10. You think he/she will listen	1	2	3	4	5
11. Your adolescent will be less likely to get pregnant/get a girl pregnant	1	2	3	4	5
12. Your adolescent will be less likely to have sexual intercourse as a young teen	1	2	3	4	5
13. You think it will do some good	1	2	3	4	5
14. You will feel relieved	1	2	3	4	5
15. Your adolescent will do what he/she wants no matter what you say	1	2	3	4	5

Appendix E_4

Sexual Health Communication Measures: General Communication

Please read each statement carefully then circle the number that best describes how you feel about the following 26 statements.

	Strongly disagree	Dis-agree	Neutral	Agree	Strongly agree
1. I often say something like "You should always look at both sides of an issue"	1	2	3	4	5
2. I really enjoy talking with my child, even when we disagree	1	2	3	4	5
3. If I don't approve of it, I don't want to know about it	1	2	3	4	5
4. We often talk as a family about things we have done during the day/week	1	2	3	4	5
5. When anything really important is involved, I expect my child to do as I wish without question	1	2	3	4	5
6. I like to hear my child's opinions, even when I don't agree with him/her	1	2	3	4	5
7. I often ask my child's opinion when the family is talking about something	1	2	3	4	5
8. I encourage my child to express his/her feelings	1	2	3	4	5
9. I often say something like "You should give in on arguments rather than risk making people mad"	1	2	3	4	5
10. I often say something like "You'll know better when you're older"	1	2	3	4	5
11. I sometimes become irritated with my child's views if they are different from mine	1	2	3	4	5
12. In our family we often talk about our feelings and emotions	1	2	3	4	5
13. My child can tell me almost anything	1	2	3	4	5
14. In our family we often talk about topics like politics and religion where some persons disagree with others	1	2	3	4	5

	Strongly disagree	Dis-agree	Neutral	Agree	Strongly agree
15. I often say something like "There are some things that just shouldn't be talked about"	1	2	3	4	5
16. As a parent I feel that it is important to be the boss	1	2	3	4	5
17. My child usually tells me what s/he is thinking about	1	2	3	4	5
18. As a parent I usually have the last word	1	2	3	4	5
19. I often say something like "You should not argue with your parents"	1	2	3	4	5
20. I often say something like "Every member of the family should have some say in family decisions"	1	2	3	4	5
21. I often say something like "My ideas are right and you should not question them"	1	2	3	4	5
22. In our family we often talk about our plans and hopes for the future	1	2	3	4	5
23. I encourage my child to challenge my ideas and beliefs	1	2	3	4	5
24. I tend to be very open about my emotions	1	2	3	4	5
25. My child and I often have long, relaxed conversations about nothing in particular	1	2	3	4	5
26. When my child is at home I expect him/her to obey my rules	1	2	3	4	5

Appendix E_5

Sexual Health Communication Measures: Sexual Health Knowledge

Please read each item carefully and mark the response with an "x" that you believe is correct.

1. The single most important factor in achieving pregnancy is
   - ☐ Time of exposure in the cycle
   - ☐ Female's desire or wish to become pregnant
   - ☐ Frequency of intercourse
   - ☐ Female's overall state of health

2. Which of the following is the most dependable (effective) method of contraception or birth control?
   - ☐ Condom (male prophylactic)
   - ☐ Diaphragm plus jelly or cream
   - ☐ Rhythm
   - ☐ Pill

3. Following release from the ovary the human ovum (egg) is capable of being fertilized for
   - ☐ 6 to 12 hours
   - ☐ 24 hours
   - ☐ 48 hours
   - ☐ 4 to 6 days

4. A good index of a female's relative fertility (ability to achieve pregnancy) is
   - ☐ Her overall health
   - ☐ The regularity of her periods
   - ☐ The level of intensity of her sex drive
   - ☐ Her ability to achieve orgasm

5. Which of the following methods of contraception is most effective?
   - ☐ Condom (male prophylactic)
   - ☐ Rhythm
   - ☐ Diaphragm plus jelly or cream
   - ☐ Intrauterine device (loop or bow)

6. The normal female most often ovulates (gives off egg)
   - ☐ Two weeks before the onset of menstruation
   - ☐ Just prior to menstruation
   - ☐ Immediately following menstruation
   - ☐ At unpredictable times throughout the cycle

7. Infertility (inability to achieve pregnancy) is
   - ☐ Familial or inherited
   - ☐ A male problem in one-third of cases
   - ☐ A female problem in 90% of the cases
   - ☐ Easily diagnosed after six months of marriage

8. Which of the following is the poorest or least dependable method of contraception?
   - ☐ Condom (male prophylactic)
   - ☐ Diaphragm
   - ☐ Post intercourse douching
   - ☐ Rhythm

9. A normal human ovum (egg) is approximately the same size as
   - ☐ A pinhead
   - ☐ A small pearl
   - ☐ A dime
   - ☐ None of the above

10. Fertilization (union of sperm and egg) normally occurs in which of the following anatomical locations?
   - ☐ The uterus (womb)
   - ☐ The cervix (mouth of womb)
   - ☐ The tube
   - ☐ The vagina

11. Menopause is a time of
   - ☐ Diminished sexual drive
   - ☐ Absolute infertility
   - ☐ Rapid aging
   - ☐ Altered reproductive and menstrual functioning

12. The rhythm method of contraception is
   - ☐ Always effective
   - ☐ Avoidance of intercourse during unsafe (or fertile) time
   - ☐ A technique of intercourse
   - ☐ None of the above

13. Pregnancy would be impossible in early adolescence when menstruation has not yet even begun or is not at all regularly established.
    ☐ True ☐ False

14. Menstrual blood is similar to a body "poison" or toxin that must be eliminated in order for a woman to remain healthy
    ☐ True ☐ False

15. A woman who begins to menstruate on the first Wednesday of every month is "as regular as a clock."
    ☐ True ☐ False

16. In order to have a normal period there must be a moderate to heavy flow in terms of amount of blood and/or duration of flow.
    ☐ True ☐ False

17. The loss of one ovary through disease or surgery diminishes a woman's fertility (ability to conceive) little if at all.
    ☐ True ☐ False

18. Anatomical differences (i.e.: size, shape, capacity, etc.) of the genital organs have a great bearing on sexual compatibility or satisfaction.
    ☐ True ☐ False

19. Unplanned or undesired pregnancies have a greater likelihood of miscarrying than do planned pregnancies.
    ☐ True ☐ False

20. Failure to have an orgasm on the part of the female eliminates or substantially reduces the likelihood of becoming pregnant.
    ☐ True ☐ False

21. Withdrawal is an effective means of contraception (birth control).
    ☐ True ☐ False

22. Birth control pills directly increase the sex drive (desire) in most women.
    ☐ True ☐ False

23. Sperm retain their ability to fertilize (cause pregnancy) for one to two days following ejaculation (release).
    ☐ True ☐ False

24. Most women are more fertile during one particular season of the year than another.

Appendix E_6

Sexual Health Communication Measures: Intention to Discuss Sexual Health

Please review the following 15 sexual health and safety topics. If you have *already discussed* the topic with your child, please mark an "x" in column 1. If you answer "Yes" please indicate in column 2 your child's approximate age when this topic was first discussed.

If you have *not discussed* the topic with your child, please indicate your intention in column 3 (mark an "x" in either the "Yes" or "No" box). If you answer "Yes" please indicate the age at which you expect to discuss each topic with your child in column 4.

	1 Have you already discussed this topic?	**2** What age did you first discuss this topic?	**3** If you have NOT discussed this topic yet, **do you plan on discussing** it?		**4** What age do you plan on discussing this topic?
1. Birth	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
2. Body differences	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
3. Reproduction	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
4. Sexual morals	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
5. Venereal disease	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
6. Contraception	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
7. Obscene words	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
8. Sexual intercourse	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
9. Petting	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
10. Rape/Sexual offenses	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
11. Abortion	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
12. Menstruation	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
13. Homosexuality	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
14. Masturbation	☐ Yes	Age _____	☐ No	☐ Yes	Age _____
15. Wet Dreams	☐ Yes	Age _____	☐ No	☐ Yes	Age _____

Appendix E_7

Sexual Health Communication Measures: Sexual Communication Frequency

Please circle the number that best describes how much *you* have discussed the following 10 sexual health topics with your child.

	not at all	seldom	some-times	in a lot of detail
1. Personal safety (to prevent child sexual abuse)	1	2	3	4
2. Correct names for genitals	1	2	3	4
3. Puberty	1	2	3	4
4. Reproduction	1	2	3	4
5. Sexual coercion and sexual assault	1	2	3	4
6. Sexually transmitted diseases	1	2	3	4
7. Abstinence	1	2	3	4
8. Birth control methods and safer sex practices	1	2	3	4
9. Sexual decision making in dating relationships	1	2	3	4
10. Sexual pleasure and enjoyment	1	2	3	4

Appendix F

Acculturation Measures

Please circle the number that best describes how you feel about the following 30 statements.

	Not at all	Very little or not very often	Moderately	Much or very often	Extremely often or almost always
1. I speak Spanish	1	2	3	4	5
2. I speak English	1	2	3	4	5
3. I enjoy speaking Spanish	1	2	3	4	5
4. I associate with Anglos	1	2	3	4	5
5. I associate with Mexicans and/or Mexican Americans	1	2	3	4	5
6. I enjoy listening to Spanish language music	1	2	3	4	5
7. I enjoy listening to English language music	1	2	3	4	5
8. I enjoy Spanish language TV	1	2	3	4	5
9. I enjoy English language TV	1	2	3	4	5
10. I enjoy English language movies	1	2	3	4	5
11. I enjoy Spanish language movies	1	2	3	4	5
12. I enjoy reading (e.g., books in Spanish)	1	2	3	4	5
13. I enjoy reading (e.g., books in English)	1	2	3	4	5
14. I write (e.g., letters in Spanish)	1	2	3	4	5
15. I write (e.g., letters in English)	1	2	3	4	5
16. My thinking is done in the English language	1	2	3	4	5
17. My thinking is done in the Spanish language	1	2	3	4	5

	Not at all	Very little or not very often	Moderately	Much or very often	Extremely often or almost always
18. My contact with Mexico has been...	1	2	3	4	5
19. My contact with the USA has been...	1	2	3	4	5
20. My father identifies or identified himself as 'Mexicano'	1	2	3	4	5
21. My mother identifies or identified herself as 'Mexicana'	1	2	3	4	5
22. My friends, while I was growing up, were of Mexican origin	1	2	3	4	5
23. My friends, while I was growing up, were of Anglo origin	1	2	3	4	5
24. My family cooks Mexican foods	1	2	3	4	5
25. My friends now are of Anglo origin	1	2	3	4	5
26. My friends now are of Mexican origin	1	2	3	4	5
27. I like to identify myself as an Anglo American	1	2	3	4	5
28. I like to identify myself as a Mexican American	1	2	3	4	5
29. I like to identify myself as a Mexican	1	2	3	4	5
30. I like to identify myself an American	1	2	3	4	5

Appendix G

Correlation Table, Full Sample

Correlations Among the Study Variables, FULL SAMPLE

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Full Sample													
1. Respeto	1	.181	-.140	-.081	-.133	-.288**	.379**	-.143	-.163	-.167	-.142	.054	-.138
2. Fatalism	.181	1	-.203*	-.217*	-.227*	-.235*	.192	-.120	-.117	-.150	-.322**	.217*	-.354**
3. Comfort	-.140	-.203*	1	.184	.329**	.249*	-.169	.004	-.020	.324**	.032	-.054	.049
4. Efficacy	-.081	-.217*	.184	1	.432**	.203*	-.105	-.158	.204	.311**	.250*	-.068	.233*
5. Expectancy	-.133	-.227*	.329**	.432**	1	.339**	-.291**	-.128	.099	.428**	.063	-.042	.069
6. Conversation	-.288**	-.235*	.249*	.203*	.339**	1	-.546**	.251*	-.029	.373**	.164	.157	.065
7. Conformity	.379**	.192	-.169	-.105	-.291**	-.546**	1	-.330**	.158	-.440**	-.072	-.157	.009
8. Knowledge	-.143	-.120	.004	-.158	-.128	.251*	-.330**	1	-.005	-.037	-.004	-.028	.009
9. Intention	-.163	-.117	-.020	.204	.099	-.029	.158	-.005	1	-.333**	.141	-.195	.197
10. Frequency	-.167	-.150	.324**	.311**	.428**	.373**	-.440**	-.037	-.333**	1	.213*	.134	.116
11. AOS	-.142	-.322**	.032	.250*	.063	.164	-.072	-.004	.141	.213*	1	-.231*	.909**
12. MOS	.054	.217*	-.054	-.068	-.042	.157	-.157	-.028	-.195	.134	-.231*	1	-.616**
13. BA	-.138	-.354**	.049	.233*	.069	.065	.009	.009	.197	.116	.909**	-.616**	1

(*p<0.05, **p<0.01)

Appendix H_1
Regression Model 1.1 Comfort

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.610	1.674		2.754	.008
RespetoScore	-.097	.158	-.070	-.609	.544
FatalismScore	-.143	.083	-.211	-1.718	.090
Religiosity	.355	.177	.223	2.007	.049
Education	.037	.139	.039	.267	.791
Income	-.285	.141	-.275	-2.023	.047
Target Child's gender	-.786	.320	-.297	-2.460	.016
Target Child's age	.061	.056	.121	1.081	.284
Older siblings	.073	.329	.025	.220	.826
Participant's gender	.005	.358	.002	.013	.989

a. Dependent Variable: ComfortScoreREV

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.243	1.948		1.665	.102
RespetoScore	-.042	.185	-.031	-.225	.823
FatalismScore	-.093	.102	-.131	-.905	.370
MarianismoScore	-.225	.281	-.109	-.802	.427
Religiosity	.558	.212	.348	2.627	.012
Education	-.034	.179	-.033	-.189	.851
Income	-.128	.189	-.115	-.675	.503
Target Child's gender	-.628	.392	-.232	-1.601	.116
Target Child's age	.072	.071	.137	1.015	.315
Older siblings	.332	.376	.117	.882	.382

a. Dependent Variable: ComfortScoreREV

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.447	2.937		2.195	.059
RespetoScore	.267	.394	.178	.678	.517
FatalismScore	-.176	.178	-.289	-.990	.351
MachismoScore	-.115	.064	-.492	-1.796	.110
Religiosity	-.284	.379	-.189	-.749	.476
Education	.139	.232	.164	.600	.565
Income	-.641	.244	-.677	-2.627	.030
Target Child's gender	.062	.716	.022	.086	.933
Target Child's age	.079	.114	.178	.695	.507
Older siblings	-.464	.791	-.151	-.587	.573

a. Dependent Variable: ComfortScoreREV

Appendix H_2
Regression Model 1.2 Efficacy

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	60.082	38.229		1.572	.121
RespetoScore	-1.471	3.750	-.047	-.392	.696
FatalismScore	-2.527	1.912	-.168	-1.322	.191
Religiosity	9.709	4.201	.262	2.311	.024
Education	4.949	3.226	.225	1.534	.130
Income	-6.516	3.254	-.277	-2.003	.049
Target Child's gender	5.752	7.469	.098	.770	.444
Target Child's age	.070	1.284	.006	.054	.957
Older siblings	-4.777	7.525	-.074	-.635	.528
Participant's gender	-2.993	8.238	-.043	-.363	.718

a. Dependent Variable: EfficacyScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	20.731	44.991		.461	.647
RespetoScore	-5.031	4.436	-.162	-1.134	.262
FatalismScore	-2.700	2.370	-.167	-1.139	.260
MarianismoScore	2.364	6.577	.048	.359	.721
Religiosity	12.529	5.176	.318	2.420	.019
Education	6.827	4.195	.271	1.628	.110
Income	-5.988	4.439	-.225	-1.349	.184
Target Child's gender	13.422	9.417	.216	1.425	.161
Target Child's age	-.306	1.632	-.025	-.188	.852
Older siblings	4.993	8.654	.077	.577	.567

a. Dependent Variable: EfficacyScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	139.465	59.215		2.355	.046
RespetoScore	4.966	7.934	.167	.626	.549
FatalismScore	-6.487	3.580	-.536	-1.812	.108
MachismoScore	2.107	1.292	.454	1.631	.141
Religiosity	-.697	7.646	-.023	-.091	.930
Education	.973	4.668	.058	.208	.840
Income	-9.758	4.923	-.518	-1.982	.083
Target Child's gender	6.097	14.441	.107	.422	.684
Target Child's age	1.699	2.301	.192	.739	.481
Older siblings	-42.999	15.943	-.702	-2.697	.027

a. Dependent Variable: EfficacyScore

Appendix H_3
Regression Model 1.3 Expectancy

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	59.441	16.353		3.635	.001
RespetoScore	-.525	1.548	-.042	-.339	.736
FatalismScore	-1.976	.815	-.319	-2.426	.018
Religiosity	1.917	1.730	.132	1.108	.272
Education	-.983	1.358	-.113	-.724	.472
Income	-.735	1.376	-.078	-.534	.595
Target Child's gender	-2.277	3.123	-.094	-.729	.468
Target Child's age	.645	.549	.141	1.175	.244
Older siblings	2.348	3.219	.088	.729	.468
Religiosity	-.638	3.502	-.022	-.182	.856

a. Dependent Variable: ExpectancyScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	57.208	19.118		2.992	.004
RespetoScore	-.098	1.812	-.008	-.054	.957
FatalismScore	-2.256	1.006	-.341	-2.244	.029
MarianismoScore	-3.459	2.759	-.178	-1.254	.216
Religiosity	3.061	2.083	.204	1.469	.148
Education	-1.412	1.752	-.148	-.806	.424
Income	-.021	1.858	-.002	-.011	.991
Target Child's gender	.197	3.846	.008	.051	.959
Target Child's age	.389	.694	.079	.561	.578
Older siblings	5.979	3.688	.225	1.621	.112

a. Dependent Variable: ExpectancyScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	62.281	32.109		1.940	.088
RespetoScore	-.487	4.302	-.037	-.113	.913
FatalismScore	.144	1.941	.027	.074	.943
MachismoScore	-.919	.700	-.444	-1.312	.226
Religiosity	1.895	4.146	.142	.457	.660
Education	.249	2.531	.033	.098	.924
Income	-2.205	2.669	-.263	-.826	.433
Target Child's gender	3.790	7.831	.149	.484	.641
Target Child's age	1.044	1.248	.264	.837	.427
Older siblings	-7.544	8.645	-.276	-.873	.408

a. Dependent Variable: ExpectancyScore

Appendix H_4
Regression Model 1.4 Conversation

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.898	.563		6.922	.000
RespetoScore	-.084	.054	-.185	-1.542	.128
FatalismScore	-.040	.028	-.181	-1.423	.159
Religiosity	.013	.060	.024	.213	.832
Education	.071	.047	.227	1.504	.137
Income	-.061	.046	-.179	-1.322	.190
Target Child's gender	.029	.106	.033	.274	.785
Target Child's age	.005	.019	.029	.252	.802
Older siblings	-.120	.111	-.127	-1.077	.285
Participant's gender	.118	.122	.114	.963	.339

a. Dependent Variable: ConversationScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.844	.598		6.429	.000
RespetoScore	-.009	.059	-.021	-.148	.883
FatalismScore	-.009	.032	-.041	-.274	.785
MarianismoScore	-.196	.087	-.308	-2.234	.030
Religiosity	.093	.066	.184	1.424	.161
Education	.103	.056	.318	1.838	.072
Income	-.078	.056	-.224	-1.381	.173
Target Child's gender	.085	.117	.101	.727	.471
Target Child's age	.001	.022	.009	.066	.948
Older siblings	-.075	.116	-.086	-.646	.521

a. Dependent Variable: ConversationScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.845	.909		5.332	.001
RespetoScore	-.042	.122	-.072	-.344	.740
FatalismScore	-.027	.055	-.113	-.485	.641
MachismoScore	-.072	.020	-.799	-3.655	.006
Religiosity	-.084	.117	-.144	-.713	.496
Education	.038	.072	.115	.528	.612
Income	-.039	.076	-.107	-.520	.617
Target Child's gender	.091	.222	.082	.409	.694
Target Child's age	-.021	.035	-.124	-.609	.560
Older siblings	-.092	.245	-.077	-.376	.716

a. Dependent Variable: ConversationScore

Appendix H_5
Regression Model 1.5 Conformity

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.996	.691		1.441	.154
RespetoScore	.192	.067	.334	2.885	.005
FatalismScore	.055	.034	.199	1.613	.111
Religiosity	.121	.073	.182	1.655	.102
Education	.051	.058	.127	.872	.386
Income	.070	.057	.162	1.241	.219
Target Child's gender	.091	.130	.083	.704	.484
Target Child's age	.010	.024	.049	.435	.665
Older siblings	.065	.136	.055	.480	.633
Participant's gender	-.158	.150	-.120	-1.050	.297

a. Dependent Variable: ConformityScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.740	.637		1.163	.250
RespetoScore	.179	.063	.377	2.858	.006
FatalismScore	.045	.034	.182	1.296	.201
MarianismoScore	.109	.093	.152	1.174	.246
Religiosity	.132	.070	.230	1.895	.064
Education	.014	.059	.038	.235	.815
Income	.037	.060	.095	.626	.534
Target Child's gender	-.054	.124	-.056	-.433	.667
Target Child's age	.033	.024	.177	1.398	.168
Older siblings	-.040	.124	-.041	-.327	.745

a. Dependent Variable: ConformityScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.733	1.171		.626	.549
RespetoScore	.067	.157	.076	.424	.682
FatalismScore	.055	.071	.152	.772	.462
MachismoScore	.090	.026	.657	3.541	.008
Religiosity	-.093	.151	-.105	-.616	.555
Education	.120	.092	.240	1.302	.229
Income	.196	.097	.351	2.011	.079
Target Child's gender	.051	.286	.030	.177	.864
Target Child's age	-.026	.045	-.099	-.572	.583
Older siblings	.322	.315	.177	1.020	.337

a. Dependent Variable: ConformityScore

Appendix H_6
Regression Model 1.6 Knowledge

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.977	4.687		3.622	.001
RespetoScore	-.528	.430	-.145	-1.227	.224
FatalismScore	-.143	.227	-.080	-.630	.531
Religiosity	-1.048	.479	-.250	-2.188	.032
Education	.166	.383	.066	.434	.666
Income	-.046	.380	-.017	-.120	.905
Target Child's gender	-.285	.870	-.040	-.327	.745
Target Child's age	-.244	.152	-.186	-1.608	.113
Older siblings	-1.363	.905	-.175	-1.505	.137
Participant's gender	2.747	1.003	.329	2.739	.008

a. Dependent Variable: KnowledgeScor

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	21.385	5.263		4.064	.000
RespetoScore	-.030	.504	-.009	-.060	.953
FatalismScore	.173	.277	.101	.627	.534
MarianismoScore	-1.387	.777	-.274	-1.786	.080
Religiosity	-.263	.575	-.068	-.458	.649
Education	.408	.488	.162	.836	.407
Income	-.564	.512	-.209	-1.101	.276
Target Child's gender	-.297	1.067	-.044	-.278	.782
Target Child's age	-.325	.191	-.254	-1.699	.096
Older siblings	-1.011	1.016	-.146	-.995	.325

a. Dependent Variable: KnowledgeScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	32.670	7.030		4.647	.002
RespetoScore	-.558	.784	-.127	-.711	.500
FatalismScore	-.586	.383	-.326	-1.532	.169
MachismoScore	-.175	.126	-.252	-1.391	.207
Religiosity	-2.598	.748	-.574	-3.471	.010
Education	-.224	.476	-.085	-.470	.652
Income	.356	.483	.126	.737	.485
Target Child's gender	1.161	1.372	.137	.847	.425
Target Child's age	-.442	.218	-.334	-2.024	.083
Older siblings	-3.709	1.881	-.365	-1.972	.089

a. Dependent Variable: KnowledgeScore

Appendix H_7
Regression Model 1.7 Intention

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.055	4.509		2.230	.029
RespetoScore	-.476	.430	-.110	-1.106	.273
FatalismScore	.159	.228	.073	.695	.489
Religiosity	1.224	.475	.244	2.579	.012
Education	.766	.378	.256	2.027	.047
Income	.277	.386	.085	.717	.476
Target Child's gender	1.186	.871	.141	1.361	.178
Target Child's age	-.971	.151	-.620	-6.440	.000
Older siblings	-.821	.903	-.087	-.908	.367
Participant's gender	-1.840	.973	-.185	-1.890	.063

a. Dependent Variable: IntentionScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.774	4.723		1.223	.228
RespetoScore	-1.005	.467	-.274	-2.152	.037
FatalismScore	.062	.257	.031	.242	.810
MarianismoScore	.831	.698	.143	1.190	.240
Religiosity	1.382	.524	.310	2.637	.011
Education	.627	.451	.221	1.390	.171
Income	.342	.480	.112	.713	.479
Target Child's gender	1.282	.998	.169	1.285	.205
Target Child's age	-.909	.176	-.624	-5.176	.000
Older siblings	-1.061	.925	-.132	-1.147	.257

a. Dependent Variable: IntentionScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.243	12.272		.509	.627
RespetoScore	1.376	1.666	.220	.826	.436
FatalismScore	-.194	.757	-.075	-.257	.805
MachismoScore	.122	.268	.132	.456	.662
Religiosity	.041	1.582	.007	.026	.980
Education	.530	.978	.150	.542	.605
Income	.681	1.085	.179	.627	.550
Target Child's gender	.624	2.987	.055	.209	.841
Target Child's age	-1.285	.482	-.728	-2.665	.032
Older siblings	.513	3.465	.037	.148	.887

b. a. Dependent Variable: IntentionScore

Appendix H_8
Regression Model 1.8 Frequency

Coefficients[a]

Full Sample	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	30.990	11.072		2.799	.007
RespetoScore	-1.822	1.048	-.181	-1.738	.087
FatalismScore	-.829	.552	-.166	-1.503	.137
Religiosity	-.252	1.172	-.022	-.215	.830
Education	.115	.919	.016	.125	.901
Income	-1.537	.932	-.202	-1.649	.104
Target Child's gender	-2.360	2.114	-.121	-1.116	.268
Target Child's age	1.693	.372	.460	4.553	.000
Older siblings	-4.387	2.179	-.204	-2.013	.048
Participant's gender	.860	2.371	.038	.363	.718

a. Dependent Variable: FrequencyScore

Coefficients[a]

Females	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	43.326	12.802		3.384	.001
RespetoScore	-2.014	1.213	-.209	-1.660	.103
FatalismScore	-.389	.673	-.075	-.577	.566
MarianismoScore	-3.793	1.847	-.250	-2.053	.046
Religiosity	-.605	1.395	-.052	-.433	.667
Education	1.040	1.173	.140	.886	.380
Income	-1.925	1.244	-.238	-1.547	.128
Target Child's gender	-1.199	2.575	-.061	-.465	.644
Target Child's age	1.522	.465	.397	3.274	.002
Older siblings	-4.748	2.470	-.229	-1.923	.060

a. Dependent Variable: FrequencyScore

Coefficients[a]

Males	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	15.883	15.830		1.003	.345
RespetoScore	3.345	2.121	.288	1.577	.153
FatalismScore	-1.326	.957	-.280	-1.386	.203
MachismoScore	-.761	.345	-.419	-2.205	.059
Religiosity	-.069	2.044	-.006	-.034	.974
Education	-2.148	1.248	-.325	-1.721	.124
Income	-2.402	1.316	-.326	-1.825	.105
Target Child's gender	-.218	3.861	-.010	-.056	.956
Target Child's age	2.048	.615	.591	3.329	.010
Older siblings	-.833	4.262	-.035	-.195	.850

a. Dependent Variable: FrequencyScore

Appendix I_1
Regression Model 2.3a Expectancy (Behavioral Acculturation added)

Coefficients[a]

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	60.293	16.426		3.671	.000
RespetoScore	-.533	1.552	-.043	-.344	.732
FatalismScore	-1.862	.828	-.300	-2.247	.028
Religiosity	2.256	1.783	.155	1.265	.210
Education	-1.368	1.440	-.158	-.950	.346
Income	-.852	1.387	-.090	-.615	.541
Target Child's gender	-1.936	3.158	-.080	-.613	.542
Target Child's age	.627	.551	.137	1.138	.259
Older siblings	2.430	3.228	.091	.753	.454
Participant's gender	-.230	3.545	-.008	-.065	.949
BAscore	1.324	1.615	.120	.820	.415

a. Dependent Variable: ExpectancyScore

Coefficients[a]

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	59.830	19.215		3.114	.003
RespetoScore	-.378	1.825	-.031	-.207	.837
FatalismScore	-2.167	1.006	-.327	-2.154	.036
MarianismoScore	-3.866	2.776	-.199	-1.393	.170
Religiosity	3.809	2.184	.254	1.744	.088
Education	-2.407	1.963	-.253	-1.226	.226
Income	.213	1.865	.021	.114	.909
Target Child's gender	1.932	4.141	.076	.467	.643
Target Child's age	.343	.694	.070	.494	.623
Older siblings	6.621	3.724	.249	1.778	.082
BAscore	2.169	1.948	.184	1.114	.271

a. Dependent Variable: ExpectancyScore

Coefficients[a]

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	67.101	32.745		2.049	.080
RespetoScore	.516	4.463	.039	.116	.911
FatalismScore	.523	1.996	.097	.262	.801
MachismoScore	-.920	.705	-.444	-1.303	.234
Religiosity	4.186	4.834	.315	.866	.415
Education	-.229	2.600	-.030	-.088	.932
Income	-2.846	2.773	-.339	-1.026	.339
Target Child's gender	-.342	9.028	-.013	-.038	.971
Target Child's age	.710	1.306	.179	.543	.604
Older siblings	-8.036	8.724	-.294	-.921	.388
BAscore	4.540	4.826	.423	.941	.378

a. Dependent Variable: ExpectancyScore

Appendix I_2
Regression Model 2.4a Conversation (Behavioral Acculturation added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.892	.570		6.823	.000
RespetoScore	-.084	.055	-.185	-1.531	.130
FatalismScore	-.040	.028	-.183	-1.416	.161
Religiosity	.011	.061	.022	.186	.853
Education	.073	.050	.233	1.451	.151
Income	-.060	.047	-.177	-1.283	.204
Target Child's gender	.028	.107	.032	.263	.793
Target Child's age	.005	.019	.029	.251	.802
Older siblings	-.119	.112	-.127	-1.069	.289
Participant's gender	.116	.125	.112	.927	.357
BAscore	-.006	.055	-.015	-.111	.912

a. Dependent Variable: ConversationScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.878	.617		6.282	.000
RespetoScore	-.010	.060	-.024	-.171	.865
FatalismScore	-.009	.033	-.040	-.268	.790
MarianismoScore	-.198	.089	-.313	-2.229	.030
Religiosity	.097	.068	.192	1.433	.158
Education	.096	.062	.297	1.540	.130
Income	-.077	.057	-.222	-1.359	.180
Target Child's gender	.093	.122	.111	.763	.449
Target Child's age	.001	.023	.009	.064	.949
Older siblings	-.073	.118	-.083	-.622	.537
BAscore	.016	.060	.039	.258	.798

a. Dependent Variable: ConversationScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.688	.907		5.166	.001
RespetoScore	-.075	.124	-.128	-.603	.565
FatalismScore	-.039	.055	-.165	-.704	.504
MachismoScore	-.072	.020	-.799	-3.705	.008
Religiosity	-.158	.134	-.272	-1.182	.276
Education	.053	.072	.162	.741	.483
Income	-.018	.077	-.050	-.240	.818
Target Child's gender	.225	.250	.203	.900	.398
Target Child's age	-.011	.036	-.061	-.293	.778
Older siblings	-.076	.242	-.064	-.315	.762
BAscore	-.148	.134	-.315	-1.106	.305

a. Dependent Variable: ConversationScore

Appendix I_3
Regression Model 2.5a Conformity (Behavioral Acculturation added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.012	.700		1.445	.153
RespetoScore	.192	.067	.334	2.866	.006
FatalismScore	.056	.035	.202	1.615	.111
Religiosity	.124	.075	.186	1.653	.103
Education	.047	.062	.117	.755	.453
Income	.069	.058	.158	1.188	.239
Target Child's gender	.093	.131	.085	.713	.478
Target Child's age	.010	.024	.049	.430	.669
Older siblings	.065	.137	.054	.475	.636
Participant's gender	-.153	.153	-.116	-.997	.322
BAscore	.014	.068	.028	.210	.834

a. Dependent Variable: ConformityScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	.675	.656		1.029	.308
RespetoScore	.182	.064	.383	2.868	.006
FatalismScore	.044	.035	.181	1.280	.206
MarianismoScore	.115	.095	.159	1.215	.230
Religiosity	.125	.072	.217	1.732	.089
Education	.027	.066	.074	.411	.683
Income	.036	.060	.092	.605	.548
Target Child's gender	-.070	.130	-.073	-.541	.591
Target Child's age	.033	.024	.177	1.389	.171
Older siblings	-.044	.125	-.044	-.354	.725
BAscore	-.030	.064	-.067	-.472	.639

a. Dependent Variable: ConformityScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	.836	1.242		.673	.522
RespetoScore	.088	.169	.100	.520	.619
FatalismScore	.063	.076	.175	.829	.435
MachismoScore	.090	.027	.657	3.378	.012
Religiosity	-.044	.183	-.050	-.239	.818
Education	.110	.099	.220	1.114	.302
Income	.182	.105	.326	1.729	.127
Target Child's gender	-.038	.342	-.023	-.111	.915
Target Child's age	-.033	.050	-.126	-.670	.525
Older siblings	.311	.331	.171	.940	.379
BAscore	.097	.183	.137	.532	.611

a. Dependent Variable: ConformityScore

Appendix I_4
Regression Model 2.7a Intention (Behavioral Acculturation added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.024	4.552		2.202	.031
RespetoScore	-.476	.434	-.110	-1.097	.277
FatalismScore	.155	.233	.071	.664	.509
Religiosity	1.212	.491	.242	2.467	.016
Education	.781	.402	.260	1.944	.056
Income	.281	.391	.086	.719	.475
Target Child's gender	1.173	.885	.139	1.325	.190
Target Child's age	-.970	.152	-.619	-6.381	.000
Older siblings	-.824	.911	-.087	-.905	.369
Participant's gender	-1.855	.990	-.186	-1.873	.066
BAscore	-.049	.439	-.013	-.111	.912

a. Dependent Variable: IntentionScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.819	4.813		1.209	.233
RespetoScore	-1.011	.478	-.276	-2.116	.040
FatalismScore	.064	.261	.032	.244	.809
MarianismoScore	.825	.711	.142	1.161	.252
Religiosity	1.395	.557	.313	2.503	.016
Education	.609	.513	.215	1.189	.241
Income	.347	.490	.113	.709	.482
Target Child's gender	1.313	1.091	.173	1.204	.235
Target Child's age	-.910	.178	-.624	-5.110	.000
Older siblings	-1.051	.945	-.131	-1.112	.272
BAscore	.036	.489	.010	.074	.941

a. Dependent Variable: IntentionScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.022	13.412		.449	.669
RespetoScore	1.330	1.853	.213	.718	.500
FatalismScore	-.212	.835	-.082	-.254	.808
MachismoScore	.122	.289	.132	.423	.687
Religiosity	-.063	1.977	-.011	-.032	.976
Education	.552	1.077	.156	.513	.626
Income	.709	1.201	.186	.590	.577
Target Child's gender	.811	3.691	.071	.220	.833
Target Child's age	-1.270	.541	-.719	-2.347	.057
Older siblings	.539	3.748	.039	.144	.890
BAscore	-.205	1.973	-.042	-.104	.921

a. Dependent Variable: IntentionScore

Appendix I_5
Regression Model 2.8a Frequency (Behavioral Acculturation added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	32.363	10.855		2.982	.004
RespetoScore	-1.835	1.025	-.182	-1.790	.078
FatalismScore	-.645	.547	-.129	-1.178	.243
Religiosity	.294	1.178	.025	.249	.804
Education	-.505	.952	-.072	-.531	.597
Income	-1.726	.917	-.227	-1.883	.064
Target Child's gender	-1.811	2.087	-.093	-.868	.389
Target Child's age	1.664	.364	.452	4.570	.000
Older siblings	-4.255	2.133	-.198	-1.994	.050
Participant's gender	1.519	2.343	.066	.648	.519
BAscore	2.133	1.067	.241	1.999	.050

a. Dependent Variable: FrequencyScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	47.171	12.206		3.865	.000
RespetoScore	-2.425	1.159	-.252	-2.092	.042
FatalismScore	-.258	.639	-.050	-.403	.688
MarianismoScore	-4.389	1.763	-.290	-2.489	.016
Religiosity	.492	1.387	.042	.355	.724
Education	-.420	1.247	-.056	-.336	.738
Income	-1.582	1.185	-.195	-1.335	.188
Target Child's gender	1.346	2.630	.068	.512	.611
Target Child's age	1.454	.441	.379	3.299	.002
Older siblings	-3.807	2.365	-.183	-1.610	.114
BAscore	3.182	1.238	.346	2.571	.013

a. Dependent Variable: FrequencyScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	19.342	14.958		1.293	.237
RespetoScore	4.065	2.038	.349	1.994	.086
FatalismScore	-1.054	.912	-.223	-1.156	.286
MachismoScore	-.762	.322	-.420	-2.364	.050
Religiosity	1.575	2.208	.135	.713	.499
Education	-2.491	1.188	-.377	-2.098	.074
Income	-2.862	1.267	-.389	-2.259	.058
Target Child's gender	-3.184	4.124	-.143	-.772	.465
Target Child's age	1.808	.596	.521	3.031	.019
Older siblings	-1.186	3.985	-.049	-.298	.775
BAscore	3.259	2.204	.346	1.478	.183

a. Dependent Variable: FrequencyScore

Appendix J_1
Regression Model 2.3b Expectancy (AOS/MOS added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	72.391	22.056		3.282	.002
RespetoScore	-.512	1.556	-.041	-.329	.743
FatalismScore	-1.886	.831	-.304	-2.269	.027
Religiosity	2.691	1.864	.185	1.444	.154
Education	-1.397	1.444	-.161	-.967	.337
Income	-.973	1.398	-.103	-.696	.489
Target Child's gender	-1.973	3.166	-.082	-.623	.535
Target Child's age	.550	.560	.120	.982	.330
Older siblings	2.720	3.255	.102	.836	.406
Participant's gender	-.210	3.554	-.007	-.059	.953
AOSmean	.711	1.781	.054	.399	.691
MOSmean	-3.874	3.492	-.148	-1.110	.271

a. Dependent Variable: ExpectancyScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	53.900	28.831		1.870	.068
RespetoScore	-.430	1.852	-.035	-.232	.817
FatalismScore	-2.208	1.027	-.333	-2.150	.037
MarianismoScore	-3.688	2.876	-.190	-1.282	.206
Religiosity	3.641	2.287	.243	1.592	.118
Education	-2.474	1.997	-.260	-1.239	.222
Income	.339	1.937	.033	.175	.862
Target Child's gender	1.894	4.184	.075	.453	.653
Target Child's age	.394	.724	.080	.544	.589
Older siblings	6.627	3.761	.249	1.762	.085
AOSmean	2.456	2.221	.174	1.106	.275
MOSmean	-1.030	4.544	-.035	-.227	.822

a. Dependent Variable: ExpectancyScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	141.334	26.927		5.249	.002
RespetoScore	1.341	2.586	.101	.519	.623
FatalismScore	-.411	1.178	-.076	-.349	.739
MachismoScore	-1.265	.417	-.611	-3.034	.023
Religiosity	11.471	3.366	.862	3.408	.014
Education	-2.490	1.611	-.331	-1.546	.173
Income	-2.595	1.603	-.309	-1.619	.157
Target Child's gender	-11.508	5.957	-.454	-1.932	.102
Target Child's age	-.096	.782	-.024	-.122	.907
Older siblings	.900	5.541	.033	.162	.876
AOSmean	4.282	2.787	.351	1.536	.175
MOSmean	-23.367	5.604	-1.165	-4.170	.006

Appendix J_2
Regression Model 2.4b Conversation (AOS/MOS added)

Full sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.795	.759		3.682	.000
RespetoScore	-.086	.053	-.190	-1.614	.111
FatalismScore	-.036	.028	-.164	-1.302	.197
Religiosity	-.023	.062	-.044	-.375	.709
Education	.073	.049	.234	1.495	.139
Income	-.046	.046	-.135	-.993	.324
Target Child's gender	.039	.104	.045	.373	.710
Target Child's age	.011	.019	.068	.590	.557
Older siblings	-.140	.109	-.148	-1.277	.206
Participant's gender	.115	.122	.111	.940	.350
AOSmean	.050	.060	.106	.834	.407
MOSmean	.228	.118	.240	1.938	.057

a. Dependent Variable: ConversationScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.479	.911		2.720	.009
RespetoScore	-.024	.058	-.059	-.419	.677
FatalismScore	-.016	.032	-.076	-.514	.609
MarianismoScore	-.160	.088	-.253	-1.815	.076
Religiosity	.065	.068	.128	.961	.341
Education	.076	.061	.235	1.241	.221
Income	-.043	.058	-.123	-.744	.460
Target Child's gender	.103	.119	.122	.866	.391
Target Child's age	.012	.023	.074	.546	.588
Older siblings	-.061	.114	-.069	-.531	.598
AOSmean	.087	.068	.183	1.277	.208
MOSmean	.240	.139	.239	1.734	.089

a. Dependent Variable: ConversationScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.341	1.381		3.142	.020
RespetoScore	-.078	.133	-.135	-.591	.576
FatalismScore	-.035	.060	-.147	-.573	.588
MachismoScore	-.071	.021	-.781	-3.309	.016
Religiosity	-.192	.173	-.330	-1.114	.308
Education	.064	.083	.194	.774	.468
Income	-.020	.082	-.053	-.238	.820
Target Child's gender	.277	.306	.250	.908	.399
Target Child's age	-.007	.040	-.040	-.170	.870
Older siblings	-.118	.284	-.099	-.414	.693
AOSmean	-.147	.143	-.275	-1.026	.344
MOSmean	.236	.288	.269	.820	.443

a. Dependent Variable: ConversationScore

Appendix J_3
Regression Model 2.5b Conformity (AOS/MOS added)

Full sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.286	.935		2.445	.017
RespetoScore	.195	.066	.339	2.970	.004
FatalismScore	.051	.034	.185	1.508	.136
Religiosity	.165	.076	.246	2.157	.035
Education	.046	.060	.116	.764	.448
Income	.052	.057	.120	.910	.366
Target Child's gender	.081	.128	.073	.630	.531
Target Child's age	.003	.024	.013	.117	.907
Older siblings	.089	.135	.074	.659	.512
Participant's gender	-.151	.150	-.115	-1.009	.316
AOSmean	-.051	.074	-.085	-.691	.492
MOSmean	-.272	.145	-.225	-1.878	.065

a. Dependent Variable: ConformityScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.872	.983		1.904	.063
RespetoScore	.195	.063	.409	3.087	.003
FatalismScore	.051	.034	.208	1.482	.145
MarianismoScore	.082	.095	.114	.864	.392
Religiosity	.153	.073	.265	2.088	.042
Education	.044	.066	.121	.672	.505
Income	.007	.062	.018	.115	.909
Target Child's gender	-.078	.128	-.082	-.613	.543
Target Child's age	.024	.024	.128	.989	.328
Older siblings	-.055	.123	-.055	-.446	.657
AOSmean	-.091	.074	-.169	-1.243	.220
MOSmean	-.189	.149	-.165	-1.262	.213

a. Dependent Variable: ConformityScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.423	1.881		.756	.478
RespetoScore	.095	.181	.107	.524	.619
FatalismScore	.055	.082	.155	.673	.526
MachismoScore	.088	.029	.637	3.010	.024
Religiosity	.014	.235	.015	.058	.956
Education	.092	.113	.184	.818	.445
Income	.184	.112	.330	1.643	.152
Target Child's gender	-.126	.416	-.075	-.303	.772
Target Child's age	-.040	.055	-.150	-.723	.497
Older siblings	.382	.387	.210	.986	.362
AOSmean	.095	.195	.118	.490	.642
MOSmean	-.246	.391	-.185	-.629	.553

Appendix J_4
Regression Model 2.7b Intention (AOS/MOS added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	18.621	5.986		3.111	.003
RespetoScore	-.465	.422	-.107	-1.102	.275
FatalismScore	.149	.227	.068	.657	.514
Religiosity	1.515	.498	.303	3.039	.003
Education	.736	.391	.245	1.881	.065
Income	.228	.381	.070	.598	.552
Target Child's gender	1.167	.861	.138	1.356	.180
Target Child's age	-1.028	.150	-.656	-6.835	.000
Older siblings	-.694	.888	-.074	-.782	.437
Participant's gender	-1.909	.964	-.192	-1.981	.052
AOSmean	-.475	.471	-.105	-1.007	.318
MOSmean	-1.710	.928	-.190	-1.843	.070

a. Dependent Variable: IntentionScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.015	7.238		.969	.338
RespetoScore	-1.003	.484	-.273	-2.071	.044
FatalismScore	.072	.267	.036	.272	.787
MarianismoScore	.790	.735	.136	1.075	.288
Religiosity	1.431	.585	.321	2.444	.019
Education	.621	.521	.219	1.193	.239
Income	.324	.506	.106	.641	.525
Target Child's gender	1.326	1.104	.174	1.201	.236
Target Child's age	-.921	.186	-.632	-4.944	.000
Older siblings	-1.054	.955	-.132	-1.104	.275
AOSmean	-.021	.557	-.005	-.038	.970
MOSmean	-.266	1.142	-.030	-.233	.817

a. Dependent Variable: IntentionScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	34.574	11.789		2.933	.033
RespetoScore	1.775	1.134	.284	1.566	.178
FatalismScore	-.496	.514	-.192	-.964	.379
MachismoScore	-.016	.180	-.017	-.086	.935
Religiosity	2.734	1.463	.460	1.869	.121
Education	-.378	.711	-.107	-.531	.618
Income	.965	.734	.253	1.314	.246
Target Child's gender	-3.470	2.581	-.303	-1.344	.237
Target Child's age	-1.611	.344	-.913	-4.681	.005
Older siblings	3.464	2.439	.253	1.420	.215
AOSmean	-.280	1.199	-.049	-.233	.825
MOSmean	-6.968	2.453	-.768	-2.841	.036

a. Dependent Variable: IntentionScore

Appendix J_5
Regression Model 2.8b Frequency (AOS/MOS added)

Full Sample	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	9.567	14.021		.682	.497
RespetoScore	-1.875	.989	-.186	-1.896	.062
FatalismScore	-.600	.528	-.120	-1.135	.260
Religiosity	-.526	1.185	-.045	-.444	.658
Education	-.451	.918	-.065	-.491	.625
Income	-1.499	.889	-.197	-1.686	.097
Target Child's gender	-1.740	2.013	-.089	-.865	.390
Target Child's age	1.810	.356	.492	5.081	.000
Older siblings	-4.800	2.069	-.224	-2.320	.024
Participant's gender	1.482	2.259	.065	.656	.514
AOSmean	3.287	1.132	.311	2.903	.005
MOSmean	2.673	2.220	.127	1.204	.233

a. Dependent Variable: FrequencyScore

Females	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	28.298	17.939		1.577	.122
RespetoScore	-2.590	1.153	-.269	-2.247	.029
FatalismScore	-.387	.639	-.075	-.607	.547
MarianismoScore	-3.822	1.790	-.252	-2.135	.038
Religiosity	-.042	1.423	-.004	-.029	.977
Education	-.633	1.243	-.085	-.509	.613
Income	-1.181	1.205	-.146	-.980	.332
Target Child's gender	1.224	2.603	.062	.470	.640
Target Child's age	1.615	.451	.421	3.585	.001
Older siblings	-3.788	2.340	-.182	-1.619	.112
AOSmean	4.094	1.382	.372	2.963	.005
MOSmean	.444	2.827	.019	.157	.876

a. Dependent Variable: FrequencyScore

Males	Unstandardized Coefficients[a]		Standardized Coefficients[a]	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.470	20.874		.118	.910
RespetoScore	3.877	2.005	.333	1.934	.101
FatalismScore	-.842	.913	-.178	-.922	.392
MachismoScore	-.683	.323	-.376	-2.114	.079
Religiosity	-.081	2.610	-.007	-.031	.976
Education	-1.977	1.249	-.299	-1.583	.164
Income	-2.919	1.243	-.396	-2.349	.057
Target Child's gender	-.646	4.618	-.029	-.140	.893
Target Child's age	1.991	.606	.574	3.284	.017
Older siblings	-3.217	4.295	-.134	-.749	.482
AOSmean	3.318	2.161	.310	1.535	.176
MOSmean	1.020	4.344	.058	.235	.822

a. Dependent Variable: FrequencyScore

Appendix K
Mediation Regression Models (Model 3)

Regression Model 3a. Test of Mediation (Behavioral Acculturation and Marianismo)

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.152	1.402		-1.535	.131
RespetoScore	.098	.138	.094	.712	.480
FatalismScore	-.006	.076	-.012	-.083	.934
MarianismoScore	.184	.205	.116	.898	.374
Religiosity	-.247	.154	-.194	-1.604	.115
Education	.437	.131	.540	3.339	.002
Income	-.032	.132	-.037	-.243	.809
Target Child's gender	-.546	.274	-.258	-1.997	.051
Target Child's age	.001	.053	.003	.027	.979
Older siblings	-.125	.273	-.057	-.459	.648

a. Dependent Variable: BAscore

Regression Model 3b. Test of Mediation (AOS and Marianismo)

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.591	1.208		2.144	.037
RespetoScore	.120	.119	.137	1.011	.317
FatalismScore	.018	.065	.041	.282	.779
MarianismoScore	.028	.177	.021	.157	.876
Religiosity	-.095	.133	-.089	-.713	.479
Education	.402	.113	.595	3.569	.001
Income	-.130	.114	-.178	-1.142	.259
Target Child's gender	-.456	.236	-.258	-1.934	.059
Target Child's age	-.032	.045	-.092	-.709	.482
Older siblings	-.136	.235	-.074	-.579	.565

a. Dependent Variable: AOSscore